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Europe



Health Impact Assessments and Health in Environmental Assessments – developing further implementation strategies

Report of the expert meeting

Bonn, Germany, 24-25 September 2015



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Abstract

The importance of assessing the health implications of policies, plans, programmes and projects in different sectors has been acknowledged for more than two decades. Health Impact Assessment (HIA) supports Member States in significantly improving the health and well-being of populations and tackling health inequalities. The WHO Regional Office for Europe convened an expert meeting to discuss the status quo on HIA implementation and the integration of health aspects in environmental assessments in order to develop support for Member States in furthering HIA implementation and enhancing integration of health aspects in environmental assessments (EAs).

Keywords

Health Impact Assessment

Environmental Impact Assessment

Strategic Environmental Assessment

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Citation Advice

Vohra S, Nowacki J, Martuzzi M, editors (2016). Health impact assessments and health integration into environmental assessments – developing further implementation strategies. Meeting Report of the expert meeting. Bonn, Germany 24-25 September 2015. Copenhagen: WHO Regional Office for Europe.

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List of abbreviations

CEHAP	Childrens' Environmental Health Action Plan
DG	Directorate General
EA	Environmental assessment
EASP	Escuela Andaluza de Salud Pública
EC	European Commission
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EHFPs	Environment and Health Focal Points of the WHO Regional Office for Europe
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social Standards
EU	European Union
EUPHA	European Public Health Association
GIS	Graphical Information System
HA	Health Assessment
HIA	Health Impact Assessment
HTA	Health Technology Assessment
IA	impact assessment
IFC	International Finance Corporation
IFI	international financial institution
ICMM	International Council on Mining and Metals
IPIECA OGP	International Petroleum Industry Environmental Conservation Association and International Association of Oil & Gas Producers
MFI	Monetary and Financial Institutions
MS	Member States
MTAN	Mining Technical Advice Notes
NCEA	Netherlands Commission for Environmental Assessments
NEHAP	National Environmental Health Action Plan
NIS	Newly Independent States
PS	Performance Standard
OECD DAC	Organisation for Economic Co-operation and Development – Development Assistance Committee
OVOS	оценка воздействия на окружающую среду (EIA)
SEA	Strategic Environmental Assessment
SER	State Environmental Review
SR	State Review
SPZ	Sanitary Protection Zone
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNGP	United Nations Guiding Principles
WHO	World Health Organization

Acknowledgment

The meeting was supported by funds generously provided by the German Government through the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety.

Executive Summary

The importance of assessing the health implications of policies, plans, programmes and projects of different sectors has been acknowledged for more than two decades and is a fundamental tenet of modern public health. The WHO Regional Office for Europe's framework on health (Health 2020) re-emphasizes the need for a whole-of-government and whole-of-society approach, where different sectors collaborate to deliver health-friendly policies. In such an approach Health Impact Assessment (HIA) plays a crucial role, identifying the links between activities performed in different sectors and their implications for human health. Importantly, not only are risk factors and detrimental impacts considered, but also opportunities for positive health outcomes that can be achieved through undertaking appropriate activities.

The need for HIA was recognized at the 1989 European Ministerial Conference on Environment and Health, held in Frankfurt. In the Parma Declaration of 2010, WHO European Member States furthered their commitment to improving and strengthening development of identified tools, such as HIA and health-including environmental assessments (EAs) of policies, plans, programmes and projects. The implementation and use of HIA and other forms of health-relevant impact assessment varies greatly across the WHO European Region: Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs) are widely implemented as a legal requirement¹ and available published evidence shows that, out of the 53 WHO European Member States, at least 27 use some forms of HIA, from capacity building workshops, to HIA pilot projects, to regularly conducting HIAs in accordance with their laws.

This report presents the findings of a WHO technical meeting which discussed models and practice of HIA implementation and how to enhance the coverage of health in EAs, in order to develop a resource for Member States to strengthen their practice of HIA or the health coverage in EAs.

Several opportunities to move HIA and the assessment of health impacts in EAs ahead are available, including the Health in All Policy Approach and WHO Regional Office for Europe's Health 2020 policy framework, as well as the transition phase of the reviewed EU EIA Directive.

Challenges, however, remain: a need to clarify concepts and implementation of addressing health impacts in policies, plans, programmes and projects, especially in the formalized process of EAs like EIA and SEA; a need to adopt consistent models of human health and well-being from a public health professional perspective; and a need to promote the added value of HIA and HA in EAs.

¹ 42 out of the 53 WHO European Member States are Parties to the UNECE Espoo Convention on EIA in a Transboundary Context, out of which 25 are also Parties to the UNECE Protocol on SEA to the Espoo Convention. In addition, all 28 Member States of the European Union (EU) had to adopt procedures and rules for EIA and SEA in their national legislation based on the European Directives on EIA (2014/52/EU) and SEA (2001/42/EC).

Another common problem is that health authorities are often asked to comment on EIA/SEAs but, already stretched by a growing agenda, they are not used to routinely engaging in these assessments. Together with differing technical language in different sectors, and the still persistent so-called silo working approach among different sectors makes it difficult for health to collaborate with other sectors.

EAs are often only focused on pollution and exposure to specific risk factors, and aim at checking that standards and limit values are complied with. Even when standards are met, EAs often fail to consider possible health impacts, for example among vulnerable population groups, and to consider how these risks may be accumulating in an affected community. In addition, social determinants are only rarely looked at and prevention aspects are not always well developed in EA.

The lack of legal regulations for HIA is often regarded as a hindrance to further implementation. Even when health is mentioned in legislation, as is the case now in the EIA and SEA Directives of the European Union, it still remains a generally defined concept and sector-specific guidance on how and which health impacts to assess in the EIA/SEA seems to be needed.

Some methodological concerns were raised regarding the absence of a standard HIA approach that can be applied in all contexts, and the lack of clarity as to who should conduct the HIA or HA in an EA, what are the necessary qualifications to do so, and how to assess the quality of the HIA and HA within the EA.

The following actions were suggested to further enhance health in EAs and HIA implementation:

- Define good quality standards for health in EAs;
- Support Member States in developing legal regulations/frameworks for HIA with a systemic view.
- Break the language barriers: Translating key materials from the World Health Organization (WHO), the International Association for Impact Assessment (IAIA), the European Investment Bank (EIB), and International Finance Corporation (IFC), in order to facilitate capacity building and other communication;
- Design and conduct joint intersectoral capacity building in Member States for health, environment and planning experts;
- Develop and offer intersectoral train-the-trainers workshops to further develop in-country capacity building on HIA and health in EA and set methodological standards;
- Create and provide resources for HIA and health in EA e.g. guidance in national languages, sector specific guidance;
- Support further networking through informal networks, e.g. establish a self-help HIA group through European or national HIA and HA in EA networks and further promote already existing networks like the HIA e-mail list server run by the University of Liverpool;
- Promote HIA and HA within EA through already existing networks, e.g. Healthy Cities, Regions for Health;
- Develop good practice case studies in a public health or environmental health priority area to make the added value explicit;
- Provide evidence (good practices, case studies) of how EA and HIA together support good decision-making for improving the health of the population; and
- Support HIA and health in EA as a possible theme to be discussed at the upcoming 6th European Ministerial Conference on Environment and Health, e.g. as a side event.

1 Introduction and background

The importance of assessing the health implications of policies, plans, programmes and projects of different sectors has been acknowledged for more than two decades. The WHO Regional Office for Europe's framework for public health, Health 2020, re-emphasizes the need for a whole-of-government and whole-of-society approach. In such an approach HIA can play a crucial role in identifying the links between activities planned or performed in different sectors and their implications for human health. Importantly, not only are risk factors associated with hazards assessed, but also opportunities for positive health outcomes that can be achieved if appropriate activities are considered.

The need to perform HIA was recognized at the 1989 European Ministerial Conference on Environment and Health in Frankfurt. In the Parma Declaration of 2010, WHO European Member States further committed themselves to improving and strengthening development of identified tools, including health in EAs (EA) of policies, plans, programmes and projects and the application of HIA. The implementation and use of HIA and other forms of health-relevant impact assessment vary greatly across the WHO European Region: EIAs and SEAs are widely implemented as a legal requirement² and available published evidence shows that, out of the 53 WHO European Member States, at least 27 use some forms of HIA, from capacity building workshops, to HIA pilot projects, to regularly conducting HIAs in accordance with their laws.

This wealth of theoretical and practical experience can be better used to increase implementation of HIA and health-friendly EA in Member States – a goal that is often expressed by European Member States. Therefore an expert meeting on HIA and health in EIA was held on 24-25 September 2015 in Bonn, Germany. The aim of the meeting was to discuss models and practice of HIA implementation and how to enhance the coverage of health in EAs in the WHO European Region.

The technical meeting was led by:

- Marco Martuzzi, World Health Organization
- Julia Nowacki, World Health Organization
- Rainer Fehr, University Bielefeld

² 42 out of the 53 WHO European Member States are Parties to the UNECE Espoo Convention on EIA in a Transboundary Context, out of which 25 are also Parties to the UNECE Protocol on SEA to the Espoo Convention. In addition, all 28 Member States of the European Union (EU) had to adopt procedures and rules for EIA and SEA in their national legislation based on the European Directives on EIA (2014/52/EU) and SEA (2001/42/EC).

2 Scope and purpose of the meeting

2.1 Aims

The two-day technical meeting discussed models and practice of HIA implementation and how to enhance the coverage of health in EAs, in order to develop a resource for countries that are willing to strengthen their practice of HIA or the health coverage in EAs. For further details on the programme please refer to Appendix B: Programme.

2.2 Objectives

- Discuss the current situation of HIA implementation and of health integration in EIA and SEA in the WHO European Region.
- Systematize different options and strategies for HIA implementation and enhanced integration of health in EAs.
- Recommend area/sector specific health impacts that should be considered in EAs and their potential indicators, with special focus on the eight thematic areas defined in the EHP Roadmap.
- Identify and recommend indicators for measuring the quality of HIA and health integrated EAs.
- Identify and recommend steps and practical arrangements for strengthening health inclusive EAs, e.g. through the establishment of a specialized network.

Meeting results will be used for further dissemination through articles, policy recommendations, interregional workshops and the development of sector-specific methodologies.

2.3 Meeting Participants

Leading international HIA and EA experts from national health ministries and affiliated institutes, international organizations, academia and consultants were invited to the meeting. For further details please refer to Appendix A: List of Participants.

3 International developments on HIA and health in EAs

3.1 HIA and the integration of health in EA

M Martuzzi, WHO Regional Office for Europe

Environment and health have had a long-standing intersectoral collaboration from the 1989 Frankfurt Ministerial Conference through to the 2010 Parma Conference.

A mid-term review, co-sponsored by the United Nations Economic Commission for Europe (UNECE), was held in April 2015 in Haifa, Israel where 37 Member States and nine stakeholder organizations attended.

The 2017 Ministerial Conference will focus on air, water, food, waste, energy, chemicals, cities and disasters/climate change. Intersectoral work will continue to be a necessity.

Four strategic approaches to implementing Health 2020 have been identified: intersectoral action for health; health in all policies; whole of government; and governance for health.

The aim of this meeting was to bring together a range of experienced practitioners to discuss how we can further embed and mainstream HIA and health in EA. Detailed information on the research on HIA and health in EAs is provided by Nowacki et al. (forthcoming).³

3.2 HIA implementation and health in EA across the Member States in the WHO European Region – first results and conclusions

P Martín-Olmedo, EASP and EUPHA, J Nowacki, WHO Regional Office for Europe, I Kustov, Temporary Advisor

3.2.1 Background

An online survey was undertaken as part of a research project “HIA Implementation on Health in EIA across Member States in the WHO European Region” in 2015. At the meeting preliminary results of the survey were presented, as the survey was only closed for participants on 23 November 2015.

The survey questions covered:

1. the current status of HIA implementation across Europe;
2. the current status of the inclusion of health assessment (HAs, HIAs) within EAs (EIA/SEA) procedures; and
3. the identification of different options for a potential better integration of HAs into EA practice.

³ Nowacki J, Martín Olmedo P, Xu Tianwei, Martuzzi M, editors. Health impact assessment and the integration of health in EA. A literature review and online survey across the European Region of WHO. Copenhagen: WHO Regional Office for Europe. To be published in 2017.

3.2.2 Methodology

The online questionnaire was designed using expert advice and a review of previous research and publications on HIA Implementation in different countries and regions and the integration of HAs within EAs. Twelve dimensions were identified under the above three categories.

For 1 and 3: Current status of HIA implementation across Europe

- degree and mechanisms for HIA institutionalization
- political support and commitment for institutionalization
- actors involved in HIA practice
- resources and structures supporting HIA institutionalization
- scope of the health determinants assessed (including vulnerable groups and health inequalities)
- facilitators for further HIA implementation.

For 2 and 3: Current status of the integration of HAs into EAs

- type of HAs used
- roles and responsibilities
- degree of involvement of health experts in the HAs within EAs
- scope of HAs within EAs
- existing resources for integrating health into EAs
- facilitators/barriers for further integration of HAs within EAs.

The questionnaire is provided in Appendix D. For the final results and the full report refer to Nowacki et al. (2016).

3.2.3 Participants in the survey

HIA experts from 43 countries (28 European Union (EU) member states plus the candidate countries, potential candidates and countries closely linked to the EU through European Economic Area (EEA) or customs union agreements) plus the Environment and Health Focal Points (EHFPs) from the Member States of the WHO European Region were contacted.

A total of 199 people (123 HIA experts and 76 EHFPs) were asked to participate. By September 2015, WHO had received 43 complete answers from 20 countries (Austria, Denmark, France, Germany, Greece, Hungary, Israel, Italy, Lithuania, Malta, Montenegro, Netherlands, Norway, Poland, Serbia, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom of Great Britain and Northern Ireland). The majority of respondents had a public health background (21) with others having an environmental science (7), environmental health (3) and other science backgrounds (epidemiology, sociology, biology, chemistry, veterinary, occupational health, statistician and geography).

The starting year of participants in terms of experience of HIA ranged from 1977 to 2015 with the greatest number of participants clustering between 2004 and 2007. Respondents with the longest experience came from the Netherlands, Switzerland and the United Kingdom.

Four respondents had undertaken more than 30 HIAs, nine had undertaken 15-20 HIAs, eleven had undertaken between 6 and 14 HIAs and fifteen had undertaken 5 or less. The majority of respondents had undertaken HIAs on projects (34%) followed by plans (24%), policies/strategies (20%) and programmes (11%). The majority of respondents has undertaken HIAs at local level (40%) followed by regional level (20%), national level (21%) and international/transboundary level (11%).

The majority were involved in conducting HIAs (31%) followed by developing HIA methodology (24%), developing HIA training (17%), reviewing HIAs (12%) and developing HIA legislation (7%).

3.2.4 Findings on HIA implementation and institutionalization

Implementation

As far as respondents were aware, the starting year that HIA was conducted in a country ranged from 1980 to 2011, with the majority of countries (9) declaring first experiences on HIA during years 2004-05. Though 32% of respondents did not have a clear idea about how many HIAs in total were conducted in their own countries, 39% of respondents provided a figure of more than 20 HIAs, 14% between 5 and 10, 7% between 11 and 20 and 9% less than 5. This experience on HIA is being maintained according to 70% of respondents, while 11% considered that no experience at all is being developed, and 19% didn't know or were not sure.

The majority of respondents stated that there were a range of resources available for implementing HIA in their countries. A great part of those resources were ad hoc rather than regularly developed or updated. Resources include training of health experts, training of public health authorities, specific HIA tools, specific HIA guidelines, training of environmental assessors and training researchers.

Regarding the scope of the conducted HIAs, environmental determinants of health were most often routinely tackled followed by built environment and housing; behavioural risk factors; biological factors; employment and livelihood; health services; family and community structure; other public services; social, economic and political factors; and private services/local economy. There was also some routine consideration of the interrelationships between these health determinants.

Vulnerable groups and health inequalities were routinely considered in only a small proportion of countries.

Institutionalization

Institutionalization in this survey was defined as “systematic integration of HIA into the decision-making process and creation of a ‘permanent demand’ for HIA use”. Two broad mechanisms for institutionalization were identified: mandatory and voluntary.

Mandatory mechanisms are:

- specific single law directly addressing HIA implementation, i.e. specific HIA law, Public Health Acts (PHA) (national, or regional/local), Health Promotion and Prevention Acts;
- national (or regional) environmental legislation requiring HIA or consultation with health experts, i.e. EIA and SEA legislation; and
- strategies or working procedures requiring HIA at local level

Voluntary mechanisms are:

- working procedures for supporting HIAs at all levels
- demands from the population (community-led HIA)
- advocate HIAs (i.e. universities, NGOs, etc.).

Many respondents judged that some mechanisms of HIA institutionalization have been applied in their country, a majority using mandatory forms such as EIA or SEA legislation; an HIA or public health law; or a request by a health authority. A smaller proportion of participants considered that

HIAs were undertaken on a voluntary basis through advocate HIAs, working procedures and community-led HIAs.

The commissioners of HIAs are most often regional and local health authorities, followed by project proponents, national health authorities, regional or local environmental authorities, public health institutes, NGOs/public health advocates, community-based organizations and national environmental authorities.

On the other hand, major funders of HIA are project proponents, health authorities, academic institutions (research projects), local municipalities, environmental authorities, foundations with legal authority and ministries (for policies under development).

Most HIAs were conducted by public health consultants, environmental consultants, regional or local health authorities, academic units, public health institutes, regional or local environmental authorities, national authorities, licensed HIA assessors and national environmental authorities.

Facilitators of HIA implementation and institutionalization

The key facilitators identified by respondents are capacity building (practical training, raising awareness, exchanging good practice, networking); organizational commitment (more political stewardship and involvement, broader recognition of health by non-health sectors, political commitment to health in all policies); resources (national guideline and databases and funding the main ones); statutory framework (particularly legislation and promoting a holistic approach to health within HIA); and structure (intersectoral collaboration, license and registration for assessors and a dedicated support unit).

3.2.5 Findings on HA in EA implementation and institutionalization

Implementation

According to the majority of respondents, health considerations are assessed in the context of EA processes, most frequently integrated within the EA procedure rather than as a stand-alone HA.

In such cases, HAs within EAs are usually funded by project proponents followed by health authorities, environmental authorities, academic institutes and foundations with legal authority.

The majority of respondents stated that public health experts are involved in assessing HAs within EAs. They are most often involved in stages such as reporting and recommendations and in appraisal/risk assessment and scoping, but not so frequently in the screening and monitoring stages.

Similar to the responses for HIAs, when asked about the scope of HAs within EAs, environmental determinants of health were most often routinely considered, followed by built environment and housing; social, economic and political factors; employment and livelihood; behavioural risk factors; biological factors; private services/local economy; family and community structure; health services; and other public services. The interrelationships between these health determinants were also addressed to a certain extent. Nevertheless, the scope and health determinants assessed depend greatly on the type of project and affected sectors (e.g. energy or infrastructure).

Respondents identified the following existing resources for integrating health into EAs: legislative mandate; specific training, tools and guidelines; training on health for environmental authorities and experts; joint pilot projects for health and EIA/SEA experts; joint training for health and environmental experts; EIA/SEA training for public health authorities and experts; environment and health intersectoral working groups; and supporting units that specialize in health within EIA/SEA. In

all these areas respondents judged that further work was needed, with some also responding that there was not yet any work done on one or more of these resources.

Facilitators of HIA Implementation and institutionalization

The key facilitators identified by respondents were capacity building (training and raising awareness); organizational commitment (political support); resources (guidelines and tools); statutory framework (specific legislation and better recognition of health as a pillar in EIA/SEA); and structure (intersectoral collaboration and greater involvement of HIA/public health experts).

The key barriers reported were capacity building (not enough training, poor awareness and lack of knowledge/experience exchange); organizational commitment (low prioritization of health and lack of political support); resources (economic crisis leading to lack of funds, lack of data sources and lack of practical guidance documents); statutory framework (lack of legal requirements); and structure (bureaucracy, institutional barriers between sectors, lack of health authority involvement, lack of stakeholder involvement).

3.2.6 Key initial conclusions from the survey

In at least 22 Member States, some HIA activities were reported and further countries showed interest in it. The number of HIAs conducted in the countries varies. Supporting activities are mostly done ad hoc: joint training, working groups and support units are needed.

Despite the reported high proportion of HIA institutionalization across countries, the declared real implementation of HIA, especially at the policy level, remains low. Legal frameworks are reported as one of the strongest means for changing rules of HIA practice, but are not necessarily sufficient for successful HIA implementation. A better definition of the HIA scope, methodology and responsibility in those legal documents is necessary.

The lack of registers or databases with national/regional HIA experiences, and the lack of clearly defined responsibilities make a comprehensive overview of the real situation difficult.

The HIA and HA within EAs have been mainly focused on environmental factors and built environment and, to a smaller extent, on behavioural risk factors, and employment and livelihood. This means that the biomedical health model prevails both in stand-alone HIA and HAs within EAs. More evidence (research) is needed on causal relationships relating to social health determinants.

The so-called polluter pays principle seems to be the norm, as proponents of HA in EAs usually pay for the assessment. There is limited incorporation of HAs into the EA process. Key barriers include bureaucracy, fear of losing the environmental focus of EA, lack of awareness and not enough involvement of public health experts.

The key facilitating factors identified by respondents for further implementation of HIA and HAs within the EA process are funding, national guidelines, exchange of experiences (intersectoral collaboration) and practical joint training.

3.2.7 Internet research on HIA and health in EAs in the newly independent states (NIS)

A survey was undertaken in the newly independent states (NIS) on the publications and activities on HIA and health in EA in the NIS. The Member States concerned are Armenia; Azerbaijan; Belarus; Georgia; Kazakhstan; Kyrgyzstan; Republic of Moldova; Russian Federation; Tajikistan; Turkmenistan; Ukraine; and Uzbekistan.

An internet search using Google was undertaken using the following search terms: HIA, health in EAs (EIA/SEA), legal provisions in combination with the names of each country. The search was limited to materials in Russian.

No pure HIAs could be identified. Thirty EAs which included a health section were identified in 10 out of the 12 NISs. No specific law on HIA was identified in the NIS but all have laws on OVOS. In all countries this EA legislation also stated that impacts on human/population health should be considered. Seven guidelines or theoretical papers on EA were found. In all countries training programmes were also identified. Most of the training found was on EAs conducted by, for example, UNECE, UNDP and the World Bank, for local authorities, consultants and experts, academia, associations, organizations and other groups. Specific HIA training was reported only in Azerbaijan.

The Espoo Convention on EIA in a transboundary context has been ratified by Armenia (1997, accession⁴), Azerbaijan (1999, accession), Belarus (2005, acceptance⁵), Kazakhstan (2001, accession), Kyrgyzstan (2001, accession), Republic of Moldova (1994, accession), Ukraine (1999, ratified). Only Armenia has signed the Kiev Protocol on SEA to the Espoo Convention (2011, ratified).

3.2.8 Questions for the meeting

Key questions for the expert meeting were:

- Discussions on Health in EAs and HIA have been going on for decades but there is still a very scattered picture compare to implementation and institutionalization of EIA and SEA. Why is this?
- What is needed to have HIA and meaningful health assessment in EAs further institutionalized?
- What defines a good HIA/HA in EA?
- Which qualifications are needed for the HIA/HA part in the EA? Health is included in EAs but is what is looked at currently scoped in enough?
- What other health influencing factors should be included in the assessments on a regular basis?
- Are there sector specific differences? Do we need to define sector specific health indicators?
- How can joint trainings and working groups be established on a regular basis?

⁴ Accession: Accession is the act whereby a state accepts the offer or the opportunity to become a party to a treaty already negotiated and signed by other states. It has the same legal effect as ratification. Accession usually occurs after the treaty has entered into force. The Secretary-General of the United Nations, in his function as depositary, has also accepted accessions to some conventions before their entry into force. The conditions under which accession may occur and the procedure involved depend on the provisions of the treaty. A treaty might provide for the accession of all other states or for a limited and defined number of states. In the absence of such a provision, accession can only occur where the negotiating states were agreed or subsequently agree on it in the case of the state in question. [Arts.2 (1) (b) and 15, Vienna Convention on the Law of Treaties 1969] Source: United Nations (2015) Glossary, United Nations Treaty Collection. Available at: https://treaties.un.org/pages/Overview.aspx?path=overview/glossary/page1_en.xml

⁵ Acceptance and Approval: The instruments of "acceptance" or "approval" of a treaty have the same legal effect as ratification and consequently express the consent of a state to be bound by a treaty. In the practice of certain states acceptance and approval have been used instead of ratification when, at a national level, constitutional law does not require the treaty to be ratified by the head of state. [Arts.2 (1) (b) and 14 (2), Vienna Convention on the Law of Treaties 1969]

3.3 The European EIA and SEA Directives – consideration of health aspects in the assessment of plans, programmes and projects

S Dobreva De Schietere, DG Environment, European Commission

Environmental assessment is a procedure that ensures that the environmental implications of decisions are taken into account before the decisions are enacted. For EU member countries the two directives that set the framework for EA of plans, programmes and projects are the 2011 EIA Directive (2011/92/EU, as amended) and the 2001 SEA Directive (2001/42/EC). The Directives that also require assessments of environmental impacts are the Carbon Capture Storage Directive, the IED Directive, the Landfill Directive, the Water Framework Directive, the Waste Framework Directive and the Habitats and Birds Directives.

The current EIA Directive codifies the earlier 1985 EIA Directive (85/337/EEC) and its three amendments. The first amendment (97/11/EEC) aligned the 1985 Directive to the Espoo Convention and added selection criteria for screening. The 2003 amendment (2003/35/EC) aligned the provisions with the Aarhus Convention on importance of public participation and access to justice. The 2009 amendment (2009/31/EC) added to the two annexes of the Directive the carbon dioxide capture and storage projects. The most recent amendment of 2014 (2014/52/EU) aims to improve the effectiveness and efficiency of the EIA procedure.

There have been no amendments so far to the 2001 SEA Directive.

The guiding principle for both EIA and SEA Directives are that plans, programmes and projects which are likely to have significant effects on the environment are subject to an assessment prior to their approval or authorization. The SEA Directive aims to provide for a ‘high level of protection of the environment’ and to contribute to the ‘integration of environmental considerations’ into the preparation of plans and programmes on sustainable development. The EIA Directive aims to protect the environment and the quality of life/human health in the design, construction and operation of projects.

The SEA Directive applies to a wide range of public plans and programmes prepared and/or adopted by an authority at national, regional or local level and where an assessment is required by legislative, regulatory or administrative provisions. The two main exemptions are national defence/civil emergency and financial or budgetary plans and programmes.

Plans and programmes that always require SEA are: i) those prepared for agriculture, forestry, fisheries, energy, industry, transport, waste/ water management, telecommunications, tourism, town and country planning or land use, and those which set the framework for future development consent of projects listed in the EIA Directive; and those that have been determined to require an assessment under Articles 6 or 7 of the Habitats Directive; those co-financed by the European Union and modifications to plans and programmes. The plans and programmes that must be screened are those for smaller geographical areas at local level; have minor modifications; and those setting the framework for future non-EIA projects and those that are so-called non-sector.

Under the EIA Directive projects listed in Annex I require an EIA and those listed in Annex II require a screening that a competent authority can use to decide if an EIA is needed or not on a case by case basis or based on projects exceeding certain thresholds or criteria. Some examples of Annex I projects are: long-distance railway lines; airports with a runway length greater or equal to 2,100 metres; motorways, express roads, roads of four lanes or more of at least 10km; waste disposal installations for hazardous waste or for non-hazardous waste above 100 tonnes per day; and

waste water treatment plants above 150,000 population equivalent.⁶ Some examples of Annex II projects are: construction of railways and roads not included in Annex I; waste disposal installations and waste water treatment plants not included in Annex I; urban development projects; inland waterways, flood-relief works and canalization; and changes or extensions of Annex I and II projects that may have adverse environmental effects.

The EA procedure involves the following steps: screening (for certain programmes, plans and projects), scoping, preparation of an environmental report/study, information and consultation, decision, information on the decision, and monitoring. When screening is undertaken, it should be based on a set of screening criteria. Scoping involves assessing the scope and level of detail of the information needed for carrying out the assessment. This step is obligatory for SEA (and is often carried out in EIAs as well). An environmental report and non-technical summary is prepared on which the general public, relevant authorities and other EU member countries, are consulted. The decision itself takes account of the findings of the assessment and the consultations. When a decision is reached, information on the decision has to be communicated to stakeholders and the general public. Adverse effects should be monitored (obligatory for SEA and from 2017 also for EIA).

EIA screening occurs for Annex II projects only and for small/minor or unlisted plans and programmes in the case of SEA. Screening ascertains whether an SEA/EIA is needed, although EU member countries can exercise some discretion. Screening criteria must always be taken into account and screening decisions, including the reasons for not requiring an EIA/SEA, must be made available to the public. Key screening selection criteria include: characteristics of the project (for example, size, cumulative effects with those of other projects, natural resource use, waste production, risk of accidents, pollution and nuisance); location and environmental sensitivity of the area likely to be affected (for example, land use, natural resources, densely populated areas, areas with exceeded environmental standards and, for SEA in particular, risks to human health); and potential impact (for example, extent, transboundary nature, probability, magnitude, duration, frequency and reversibility)

Scoping determines what should be covered by the environmental information. This step is obligatory under SEA and optional under EIA. A scoping opinion is provided by a competent authority which can ask for further information. It is aimed at improving the quality of the EIA/SEA process.

The environmental report must identify, describe and evaluate the environmental characteristics of aspects and areas likely to be significantly affected; the likely significant environmental effects of the proposals (including inter-alia population and human health); reasons for the proposal and any alternatives (must be reasonable and a zero alternative for SEA or the main alternatives studied by the proponent for EIA); mitigation measures; monitoring measures and arrangements; and the report must contain a non-technical summary.

Consultations should be undertaken with environmental authorities in several stages (screening, scoping and reporting): with the public, including nongovernmental organizations, on the draft proposal and the environmental report; with other EU member countries, as required under the Espoo Convention, on the draft proposal and the environmental report. Consultations should be

⁶ One population equivalent (p.e.) means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60 g of oxygen per day. [definition source: Directive 91/271/EEC of 21 May concerning urban waste-water treatment.] Source: http://glossary.eea.europa.eu/terminology/concept_html?term=population%20equivalent

undertaken early and when there are effective opportunities to participate, when all options are open and within reasonable time-frames.

The decision made by competent authorities on a proposal must take into account the findings of the environmental report, the opinions expressed by those consulted and the feedback from transboundary consultations. Information about the final decision has to be provided to the public, environmental authorities, other countries (if consulted) and should include content of the plan/programme/decision on project, main reasons on which the decision is based, mitigation measures and monitoring measures (for SEA only at this time, for EIA from 2017).

Monitoring is mandatory for SEA and EU member countries have to monitor the significant environmental effects of the implementation of the proposal in order to identify at an early stage unforeseen adverse effects and to be able to take remedial action. Existing monitoring arrangements may be used. Discussion of monitoring measures must be covered in the SEA report. For EIA the public concerned must have access to the review procedure.

The new 2014 EIA Directive (2014/52/EU) was published on the 25 April 2014, came into force on the 16 May 2014, and must be transposed into national law by EU member countries by 16 May 2017. The aim of the revision was to enhance the effectiveness and efficiency of EIA by correcting shortcomings: the directive reflects on-going environmental and socio-economic changes and challenges, and is aligned with the principles of smart regulation and legal precedent.

The new elements of the directive are:

- a so-called one-stop shop approach for assessments under the EIA and other environmental directives have been introduced (e.g. the Habitats Directive);
- a broader scope of the EIA that includes biodiversity, climate change, risk prevention, population and human health (instead of “human beings”);
- an improved screening stage;
- a quality control mechanism for the EIA report;
- mandatory assessment of reasonable alternatives;
- the introduction of explicit time-frames for certain steps;
- implementation of mitigation and/or compensation measures and the monitoring of significant adverse effects; and
- a requirement to justify screening and EIA decisions.

EIA and SEA guidance can be found on the European Commission’s EIA/SEA home page: <http://ec.europa.eu/environment/eia/home.htm>. This includes:

- guidance on the implementation of the EIA and SEA Directives
- guidance and checklists for EIA
- screening, scoping, EIS review (per stage)
- project categories (EIA)
- indirect, cumulative impacts and interactions
- climate and biodiversity
- transboundary projects
- case-law of the Court of the EU
- studies and reports on the implementation of the EIA/SEA.

3.4 Opportunities for health in Environmental Assessments through the Performance Standards of the European Investment Bank

A Relicovschi, EIB

The European Investment Bank (EIB) of the EU is the only bank owned by and representing the interests of the EU member states. It works closely with other EU institutions to implement EU policy. The EIB is a major player because it is one of the largest multilateral borrowers and lenders by volume. It provides finance and expertise for sound and sustainable investment projects which contribute to furthering EU policy objectives. More than 90% of the EIB's activity is focused on Europe but it also supports the EU's external and development policies.

The bank's activities are organized along three product lines: lending, blending and advising. Lending is the bank's principal activity, accounting for around 90% of its total financial commitment. Blending is about creating a variety of more innovative, sophisticated financial tools to help clients combine EIB's financing with other sources of investment. Advising is about providing technical and financial expertise to clients.

The EIB's environmental and social framework is founded on the Lisbon Treaty, the EU Charter of Fundamental Rights and the United Nations Guiding Principles and International Labour Organization's core labour standards. The 2009 EIB Statement of Environmental and Social Principles and Standards states:

...policy context – EIB aims to add value by enhancing the environmental and social sustainability of all the projects that it is financing, in particular, climate change, biodiversity and ecosystems considerations, as well as the social dimensions of sustainable development are integrated into the lending policies...

The EIB's commitment to environmental and social sustainability and the protection and respect of human rights is articulated in the 10 EIB Environmental and Social Standards:

- Performance Standard 1: Assessment and management of environmental and social impacts and risks
- Performance Standard 2: Pollution prevention and abatement
- Performance Standard 3: EIB standards on biodiversity and ecosystems
- Performance Standard 4: EIB climate-related standards
- Performance Standard 5: Cultural heritage
- Performance Standard 6: Involuntary resettlement
- Performance Standard 7: Rights and interests of vulnerable groups
- Performance Standard 8: Labour standards
- Performance Standard 9: Occupational and public health, safety and security
- Performance Standard 10: Stakeholder engagement.

The EIB aims for an integrated approach to banking operations in the context of wider global drivers: human rights, climate change, and biodiversity. These are integrated within the bank and cut across all its activities and practices.

The 10 standards complement the financial and economic criteria used in the appraisal of projects. They are aligned with similar standards of other international financial institutions, and they apply to both public and private sector projects and in all regions that the bank works in.

Performance Standard (PS) 1 aims to streamline the assessment process by introducing the concept of comprehensive assessment. This ensures that broader environmental and social issues are

considered appropriately, for example climate change, biodiversity, resource efficiency, disaster risks, population and human health, involuntary resettlement, human rights, gender, and conflict, thus making them an integral part of the decision-making process. It strengthens the environmental and social assessment process by enhancing coherence and synergy with other relevant EU legislation, EU policies and international treaties i.e. with the EU *acquis communautaire*⁷ and relevant international treaties and conventions.

PS1 provides guidance on the identification of risks and impacts, including criteria and tools that could be used; the area of influence of a project that should be considered; and on determining the need for a comprehensive assessment i.e. how to undertake an environment and social screening including the information needed, criteria to be used and the link between PS1 and the others PSs. It also advises on the content of a comprehensive environmental and/or social assessment report and, by requiring the identification of the measures to avoid, reduce and, if required, offset, in the case of environment, or remedy, in the case of human rights, significant adverse residual effects, it clarifies and strengthens the requirements to use the mitigation hierarchy in the development of mitigation measures.. It also provides guidance on reviewing the quality of assessments quality review, incorporating old environmental and social impact assessments (ESIAs) and multistage development consent processes.

PS1 also clarifies that the environmental and social assessment procedure should be coordinated or integrated with other assessment procedures required by EU legislation (for example, the appropriate assessment procedure under the Habitats Directive, the Biodiversity Impact Assessment as defined in PS3, the procedure required by Article 4.7 exception under the Water Framework Directive, the Social Impact Assessment as defined in PS6, and the HIA as defined in PS9).

All projects located in the EU, candidate and potential candidate countries, which are likely to have significant effects on the environment and human health and well-being, and which may interfere with human rights, are subject to an assessment in line with the EU EIA Directive 2011/92/EU and relevant EU *acquis communautaire*. In addition, provisions of relevant treaties and conventions also apply. For projects outside the EU, candidate and potential candidate countries will also be subject to an ESIA procedure if they are likely to have significant effects on the environment, on human health and well-being or interfere with human rights. Where practicable and feasible, the ESIA must be carried out in compliance with the principles contained in the EU *acquis* and best international practice, and must take into account national laws and regulations and any obligations and standards of multilateral agreements to which the host country is a party to.

Performance Standard 9 on occupational and public health, safety and security expects proponents (promoters) to plan for, undertake, and monitor the project's adherence to the Standard throughout the project life cycle while accounting also for first-tier suppliers and primary contractors. It also provides recommendations to apply the Standard throughout the supply chain. The EIB stresses the proponents' and employers' duty of care towards project workers and society, in safeguarding occupational and public health, safety and well-being within the area of influence of their operations and at associated facilities.

⁷ The "*acquis communautaire*" is a very important concept in the European Union. It covers all treaties, EU legislation, international agreements, standards, court verdicts, fundamental rights provisions and horizontal principles in the treaties such as equality and non-discrimination. In short: EU law. Source: <http://en.euabc.com/word/12>

Performance Standard 9 aims to ensure that proponents duly anticipate, avoid, minimise and effectively mitigate risks and adverse impacts on the health and safety of host communities within the project's defined area of influence (including all associated facilities) as well as end users. Proponents must help to promote public health and safety across the project's area of influence by inter-alia supporting and promoting programmes, for example, which aim to prevent the spread of major communicable diseases. It requires that proponents provide effective access to a grievance mechanism and recourse to a remedy for all project workers and members of the public in cases of violations of their rights. PS9 also provides definitions of terminology and introduces notions regarding plans and studies and their content (for example, HIA, influx management plan, emergency preparedness plan, public health and safety measures). It also enumerates and describes the different risks related to health, safety and security that the proponent needs to address in relation to public health and safety i.e. project and population influx related impacts as well as the promotion of community health and safety.

3.5 Opportunities for further health integration into SEA – examples from UNECE projects

E Santer, UNECE

General principles of international law in relation to EA have been established through three court cases and the 1992 Rio Declaration on Environment and Development. The court cases were: the Trail Smelter case (United States, Canada arbitral award 1938, 1941); the Nagymaros-Gabcikovo case (Hungary/Slovakia, International Court of Justice 1997); and the Pulp Mill case (Uruguay/Argentina, International Court of Justice 2010).

Five principles within the Rio Declaration are relevant to EA: Principle 17 on EA, Principle 4 on integration, Principle 2 on the responsibility for transboundary environmental damage, and Principles 18 and 19 on transboundary procedure.

Environmental assessment first came to prominence with the 1969 US National Environmental Policy Act which applied to legislative proposals, policies, plans, programmes and projects. In the EU the key legislation was the 1982 Seveso Directive (as amended), 1985 EIA Directive (impact of projects), 1991 Espoo Convention (transboundary, projects), 1992 Convention on Biological Diversity and Habitats Directive (impact of plans, programs and projects on protected habitats – Natura 2000 sites), 1992 Convention on the Transboundary Effects of Industrial Accidents, 1998 Aarhus Convention, 2001 SEA Directive (impact of plans and programmes), 2003 Public Participation Directive and the 2003 SEA Protocol (impact of plans and programmes including transboundary). Today most countries have developed national environmental frameworks. Since it came into existence the Espoo Convention has been successfully applied thousands of times. However, experience with the Protocol, which only came into force in July 2010, is still limited and developing.

The UNECE Protocol on SEA to the Espoo Convention (Convention on EIA in a Transboundary Context) was adopted in Kyiv in 2003 and came into force in 2010. There are 26 signatories including the EU. The Espoo Convention applies to specific activities (projects) with possible transboundary impacts. The Protocol applies to all plans and programmes prepared by authorities (and policies and legislation) independent of a transboundary impact. Both are applied for development consent for projects in agriculture, forestry, fisheries, energy, industry including mining, transport, regional development, waste management, water management, telecommunications, tourism, town and country planning or land use. The exceptions are civil defence, budgetary and small area plans and

minor modifications to plans. Examples of plans under the protocol include: transport ministry early investment plan (Denmark), Forest management plans including private forests (France), plans for encouraging investments (Hungary), urban renovation programs (Poland), shale gas development plans (United Kingdom), Orhei Town masterplan (Republic of Moldova), renewable energy plan (Azerbaijan) and waste management strategy and action plan (Georgia).

The objectives of the Protocol (Article 1) are to ensure that environmental considerations, including health, are thoroughly taken into account in the development of plans and programmes; to contribute to the consideration of environmental, including health, concerns in the preparation of policies and legislation; to establish clear, transparent and effective procedures for SEA; to provide for public participation in SEA; and to integrate by these means environmental, including health, concerns into measures and instruments designed to further sustainable development.

The Protocol complements the EU's SEA Directive. It has a broader geographical coverage as it is open to all United Nations Member States (it is a potential basis for a globally consistent standard for SEA). It is a non-mandatory framework for SEA of policies and legislation (Article 13) but with mandatory reporting. It has a special emphasis on health, reflecting the involvement of WHO in its development, and health issues must be considered based on the mandatory consultation of health authorities. It also advocates for extensive public participation building on the UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice. The general public has the right to know, comment on, have comments taken into account and be informed of the final decision and its reasons. Article 3.1 obliges countries to ensure that the necessary legislative, regulatory and other appropriate measures are taken to implement the provisions of the Protocol within a clear, transparent framework.

The main steps of the Protocol are: determination of whether an SEA is required under the Protocol (Articles 2 and 4); determination of the scope of the environmental report and thus of the assessment (Article 6); environmental report (Article 7 and Annex IV), decision-making and taking into account the SEA (Article 11); and monitoring (Article 12). The process is iterative and involves consultation with environmental and health authorities (Article 9), public participation (Article 8) and transboundary consultations (Article 10).

Overall, the process is similar to the general process of SEA and how it fits with the plan and programme-making process.

One of the key roles of the UNECE Secretariat is technical advice and capacity building. This includes review of current legislation, the drafting of new legislation, pilot projects to test and improve national implementation, national and local capacity-building workshops,; and the development of guidance documents (for example, SEA Resource Manual, 2010/11; Simplified Resource Manual; 2012).

One example of technical support is the Greening Economies in Eastern Neighbourhood Programme (EaP GREEN). This is a large subregional programme running between 2013 and 2016 run by UNECE, the Organisation for Economic Co-operation and Development (OECD), the United Nations Environment Programme (UNEP), and the United Nations Industrial Development Organization (UNIDO). It is financed by the EU, the four implementing organizations and other donors. It is assisting Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova and Ukraine in their transition to a green economy by supporting them to decouple economic growth from environmental degradation and resource depletion. The project has three components: governance and finance; SEA and EIA; and demonstration projects.

The second component aims to promote the use of SEA and EIA as essential approaches that can help the countries achieve the overall objective. The component has three phases. Phase I involves the revision of the existing national regulatory and legislative framework through legislative review of SEA and, as appropriate, of EIA; followed by drafting of SEA legislation and subregional overview. Phase II calls for capacity building on SEA and EIA procedures through national and subnational level training on SEA; development of national guidance documents; coordination and experience-sharing events; and pilot SEAs and EIAs. Phase III is for strengthening administrative capacities through legislative reviews and development of recommendations; policy dialogue; institutional reviews and recommendations.

Phase II example projects include: a pilot SEA of Orhei Town Masterplan and Green Economy Strategy SEA (planned) in the Republic of Moldova (June 2014 – May 2015); National Waste Management Strategy/Action Plan SEA in Georgia (August 2015 – ongoing); National Strategy on Renewable and Alternative Energy Use SEA in Azerbaijan (February 2015 – ongoing); waste management strategy SEA in Armenia; and Socioeconomic Development Strategy in Zabaikalje Krai (Russian Federation).

The SEA process in these technical projects has involved national SEA teams (planning authority, experts), two formal national SEA training workshops with participation of environment and health authorities, and two public consultation events that included environment and health authorities. In the Republic of Moldova there was full engagement that involved the Ministry of Health, National Centre of Public Health (NCPH) of the Ministry of Health (Division of the Hygiene of Environment), Public Health Centre from Orhei (Director and senior specialist) and WHO (participated at the start-up meeting). No health experts were employed by the project because of a lack of expertise. In Georgia and Azerbaijan, a health expert was hired. In Georgia, the National Center for Disease Control and Public Health and the Ministry of Labour, Health and Social Affairs of Georgia were involved. In Azerbaijan, the medical university was involved but health authorities were not fully engaged.

Health aspects were integrated from the very beginning. These varied by sector though there were common environmental determinants (precursors) and indicators. The environmental determinants were such as air quality, water quality, toxic substances and noise level. The common indicators were life expectancy and health status (longevity) and types of diseases that were prevalent. The depth of the assessment was based on the scope of the assessment and data availability.

Key outcomes of the project in Moldova included legislative, training and guidance outcomes. The legislative outcomes were a national round-table on the legal implementation of the Protocol on SEA (2013) and national round-table meeting on the draft Law on SEA and its pilot application to urban plans and programmes (2014). The project outcomes were: a practical application of the draft Law of the Republic of Moldova on SEA to urban plans and programmes (PART I and II, 2014); the first public consultation meeting to inform local stakeholders about the Orhei Town Masterplan preparation process and the preliminary results of the SEA (2014); a public participation workshop on the draft SEA report and the Masterplan (an advisory mission to supervise the implementation of the pilot project on application of SEA to the Masterplan, 2015); a presentation of the results of the Orhei Masterplan pilot project at the “Strengthening National Capacities for Sustainable Housing” event organized by the UNECE Housing and Land Management department (2015); and a public hearing on the Law on SEA and final event for the Masterplan SEA (2015).

Phase III is ongoing and will involve: the preparation of the national level pilot project (2015-2016); implementation of the national level pilot project (2015-16); development of SEA guidance (2016); and development of bylaws (2016).

There have also been other regional and country activities such as technical advice and capacity-building activities to support the implementation of the UNECE Protocol on SEA in eastern Europe and the Caucasus (Minsk, 2014); a study tour in the Czech Republic 'Application of SEA at the national level in the field of urban planning, waste management, agriculture and energy sector' (Prague, 2014); lessons learned from drafting the SEA legislation in EaP GREEN countries (Georgia, 2015); and train the trainers workshop on the practical application of SEA (Georgia, 2015).

The key challenges faced in the project were that there was no legal framework for SEA (these were pilot applications); a lack of understanding of the roles of the sectoral authorities, environmental and health authorities; a lack of inter-institutional coordination; a lack of public health and environmental data, especially at local level (existing health data is aggregated at a different scale, lack of proper monitoring system at the local level for air and water quality, no systematic monitoring of car traffic intensity, noise and dust, hence use of expert judgement); the lack of operational methodology at the national level; and the need for training.

More information is available on the project web site (<http://www.green-economies-eap.org>) UNECE (http://www.unece.org/env/eia/about/eap_green.html) and OECD web sites (<http://www.oecd.org/env/outreach/eapgreen.htm>).

3.6 Health in EIA in resource constrained settings

M Pfeiffer, WHO

Monetary and Financial Institutions (MFIs) are working in many countries around the world where the general government expenditure on health as a percentage of total government expenditure is less than 13% and in many cases less than 8%. Many countries rely on funds from the extractive sector (tax and royalty revenues, direct project-related expenditure by the extractive sector and social investment by the extractive sector). This provides an important opportunity for public health agencies to influence how these monies are most effectively spent.

EIAs are routinely required and undertaken, as best practice, by the extractive sector. EIAs cover the whole lifecycle of the project from exploration and design, construction, operations, closure and rehabilitation/remediation. EIA is therefore an important entry point for health. It is important because it is an upstream process and by integrating health it can allow for the early identification of primary prevention opportunities; it can help avert unnecessary health burden and related costs for communities and well as for workers (and their employers); and it can be an important anchor for HIA in the extractive industry project development, assessment and management process.

Though EIA regulations often contain clear provisions for health, in practice, health is often not well articulated in regulations; consideration of health is often limited to only environmental determinants of health (i.e. air, water and soil pollution and noise). In addition, the assessment of relevant social issues (e.g. labour conditions, resettlement issues) are often done in parallel rather than integrated into the EIA. So, to get a complete picture of community health the combined effects of social and environmental factors needs to be considered. This does not often happen unless health is well articulated early in the EIA process.

HIA originated from two broad drivers: technical/scientific approaches and political/administrative. Technical and scientific approaches like EIA and health risk assessment (toxicology and environmental epidemiology) focus on the assessment of physical and environmental rather than the social determinants of health and the quantification of hazard and risk. Political/administrative approaches such as health promotion and healthy public policy focus on lifestyle and socioeconomic determinants of health and the need to involve communities in decision-making and undertake community development.

HIA has developed somewhat separately within the health sector and within the development sector. In the health sector HIA has been advocated and developed through the 1978 Alma Ata Declaration and World Health Assembly (WHA) Resolution on Health for All; the 1986 Ottawa Charter on Health promotion; the 1988 Heathy Cities programme; the 2008 Report of the Commission on the Social Determinants of Health; 2009 WHA Resolution on the Social Determinants of Health and WHA Resolution on Primary Care; and the 2010 Adelaide Statement on Health in All Policies.

In the development sector, HIA as part of or alongside EIA has been advocated and developed through the 1989 World Bank Operational Directive on Environmental Assessment; the 1997 World Bank Environmental Sourcebook update includes health in EIA; the 1998 World Bank pollution, prevention and abatement handbook; the 2003 adoption of the Equator Principles; the 2006 International Petroleum Industry Environmental Conservation Association and International Association of Oil & Gas Producers (IPIECA OGP) Guide to HIAs in the oil and gas sector; the 2007 updated International Finance Corporation (IFC) environmental and social performance standards; the 2010 International Council on Mining and Metals (ICMM) Good Practice Guide to HIA and the OECD Development Assistance Committee (DAC) Guidance on health in SEA.

This twin track development has led to many different types of approaches and applications of HIA: community empowerment, supporting health systems strengthening, tackling noncommunicable diseases; identifying drivers for health inequity; climate change and the path to a green economy; access to environmental justice and environmental and social risk management.

HIA can be integrated into the EIA system and its processes at various places. These include pre-screening, screening, scoping, analysis of impacts, stakeholder engagement and monitoring.

The factors that enable health to be integrated or considered within EIA systems and processes are: regulation or policy requirement (that health should be considered and how it should be assessed); operational procedures (for conducting EIA); quality standards for EIA (that include criteria for evaluating how fully and appropriately community health has been assessed); institutional capacity (having skilled HIA and health in EIA practitioners and regulators with knowledge and experience of the public health implications of key sectors); and evidence/intelligence (on the likely health and well-being impacts of projects in different sectors).

WHO will be publishing a new technical series on health in EIA. This will include guidance notes for regulatory authorities; project proponents; and impact assessment practitioners as well as a training course programme for regulatory authorities and their health sector counterparts.

3.7 Reuniting planning and health

T Fischer, University of Liverpool

Spatial planning has an important role to play in improving health through the design of space. It is a power lever to positively influence the wider determinants of health. Key opportunities include

supporting the design of active travel and creating appropriate densities for supporting viable key services and amenities, for example shops, schools, recreational facilities, and greenspace.

Spatial planning and human health and well-being are linked. Concern for population health has in fact been the main reason for spatial planning, as we know it, to emerge. Various determinants of health can be influenced through planning. These include, for example, healthy natural environments (good air, water and land/soil/vegetation), impact of built environments on health (physical, recreational and social activities, active travel), economic activity (jobs, income) and mental well-being. There are substantial potential annual health budget savings when changing commutes from more passive modes to cycling; there is also reduced noise nuisance from motorised road traffic and a potential increase in economic activity.

There is strong evidence that open space that is safe and easy to access is likely to increase physical activity. This is important as moderate physical activity has beneficial physical and mental health effects. Reducing motorised traffic also reduces air pollution which has beneficial effects on respiratory and cardiovascular health. Furthermore, there is evidence that green spaces can improve mental health. There is also some evidence that that green space improves levels of physical activity and that better insulation and heating improves physical and mental health. Some weaker evidence exists for traffic interventions reducing traffic accidents or increasing physical activity.. Finally, there is anecdotal evidence that local access to healthy food may improve diets.

Guidance and case studies on health inclusive planning often refer to the examples of Freiburg and Hammerby. However, the experience of those cities is not necessarily easily reproducible elsewhere. Though there are a range of objective criteria to assess the health aspects of plans, programmes and projects often there are tensions between stakeholders and vested interests that can influence the planning process. As planning is often about wicked issues, associated EAs – EAs (both project EIAs – EIAs and SEAs – SEAs) therefore often involve trade-offs or create conflicts and incompatibilities that need to be resolved in an open and transparent way.

EAS can support more balanced decision-making by leading to transparent, inclusive and informed decisions. Health is considered to be an integral part in many legislative systems of EIA and SEA. However, in this context, the focus is often on disease and illness risk factors, as opposed to opportunities for pro-actively promoting health and well-being. One of the reasons is that health professionals are often uncomfortable about getting involved in planning and EA as these are not frameworks they are familiar with. Also, decision-makers for spatial and other policies, plans and programs often appear to lack a comprehensive understanding of health. Public health may be dealt with in a different administration and there is often separation of powers that may be based on constitutional and legislative requirements. Generally speaking, EAs should act as a 'critical friend' to planning. In this context, EA can function as a design tool to enable the best possible location of key neighbourhood amenities.

Research on the most frequently mentioned health-related issues in English core strategies (the most strategic parts of local spatial plans) and SEA inclusive sustainability appraisals found the following top ten health issues being considered:

- (1) access to and availability of health facilities
- (2) green infrastructure/open space
- (3) leisure and recreation facilities
- (4) housing (affordable, appropriate, decent)
- (5) air quality/pollution
- (6) healthy lifestyles

- (7) health and well-being
- (8) reduce car use
- (9) promote public transport, walking and cycling
- (10) health inequalities.

Furthermore, research found the following top ten health issues considered in German local spatial plans (FNPs) and their associated SEAs:

- (1) air quality and pollution
- (2) noise
- (3) recreation/leisure facilities
- (4) climatic situation/bio climate
- (5) well-being
- (6) smell
- (7) humane environment
- (8) housing (appropriate, healthy)
- (9) thermal stress/heat island effect
- (10) flooding

The main constraining factors for the full consideration of health in EAs are the financial situation of local authorities, insufficient cooperation of different planning levels, insufficient local data on health and climate change, lack of awareness of health and health determinants, lack of explicit legal requirements to consider health (though this seems to be changing), and lack of guidance on assessing health impacts. Furthermore, how to monitor health impacts of climate change is unclear and there is lack of participation of health experts. Integration of health into EAs rather than separate assessments may be able to resolve some of these constraints.

3.8 HIA toolkit for healthy cities – practical experiences

N Cantoreggi, Healthy City Network/GRES

The Healthy Cities concept and movement has three pillars: WHO Health for All Strategy; Health Promotion (Ottawa Charter); and Agenda 21 for Sustainable Development. Healthy Cities uses a socio-ecological model of health to frame its activities. Hence improving health is based on influencing the determinants of health in particular settings (for example housing); work conditions; and the quality of the environment (physical, social and cultural). It is a continuous improvement process like the ISO 14000 standards.

Up to now there have been six phases (1987-1992, 1993-1997, 1998-2003, 2004-2008, 2009-2013 and 2014-2018). Each phase focuses on a different aspect, cities apply to become part of the movement and they need to make a financial commitment. The membership requirements are political commitment, a local coordinator, a steering group and annual reporting of achievement.

There are several levels at which the healthy city movement acts. At city level are the 1,400 cities around the world (100 cities in Europe); at the country level are national networks (30), and at the regional level is the WHO European network of national networks.

Three approaches have been used to introduce HIA in the European Healthy Cities Network. The PHASE Project (2003-2005) promoted and supported integrated approaches for health and sustainable development at the local level across Europe; HIA and developing HIA methodologies was one of the four core themes of Phase IV (2003-2008); and the setting up a subnetwork in HIA.

The PHASE Project developed a HIA toolkit for practitioners responsible for introducing and implementing HIA at local level. Five key documents were produced: a background paper on HIA, a training module, a brochure for decision-makers and two case-studies on implementing HIA (Bologna and Trnava).

In Phase IV, a subnetwork was created for the HIA theme and Belfast was the HIA lead city. The general objectives for HIA in this phase were: raising awareness and creating a common understanding of HIA; strengthening capacity within cities so that HIA can be applied at city level; providing results, sharing experience and providing evidence of HIA's contribution to health development in cities; and mainstreaming HIA to integrate health and well-being into all new city policies. The specific HIA objectives were translating the PHASE toolkit; conducting a pilot HIA; conducting a process evaluation of a pilot HIA; and applying the learning from the pilot HIA to the next HIA. There was also a focus on equity and participation and developing links with healthy urban planning.

Resources developed by the HIA subnetwork for city governments included: step-by-step guide and training module; brief for decision-makers; developing HIA practice using proposal analysis, process evaluation and peer review; integrating HIA/health into other impact assessments: EIA, SEA and sustainability appraisal; and compilation of resources for HIA available on the internet such as sources of evidence, tools and case-studies. All of these were developed, including updating of the materials, during the PHASE Project, in response to the needs of member cities for easy-to-use guidance and easy access to resources; need to improve the quality of HIAs; and the need to integrate HIA with existing assessments. HIA training was undertaken in 25 cities and 15 cities had undertaken HIAs (a broad range of proposals were assessed, a few on environmental health issues).

The role of the HIA subnetwork was to steer the technical and strategic agenda for the delivery of Phase IV HIA objectives. These were: understanding the policy environment within which HIA processes could be introduced; understanding the preconditions for the application of HIAs; cross link with other WHO core themes; developing capacity for HIA; setting quality standards for HIA; and linking/integrating HIA with other assessment processes.

Evaluation of HIA core theme was based on multiples sources (WHO reports, annual reporting templates – ART, city implementation of Phase IV and participatory observation). It found that in several cities, there is emerging knowledge to plan and implement HIA. There was considerable innovation in the methods and practices for HIA used by cities. The dynamics already present in Phase IV needed to be strengthened and built upon. Most cities achieved Objective 1 (awareness and understanding), fewer cities achieved Objectives 2, 3 and 4. Objective 4 mainstreaming was achieved by only seven cities in the United Kingdom and Scandinavia i.e. those with previous experience of HIA. Most cities found it difficult to implement HIA in a short timescale. The evaluation found that cities are a spearhead for promoting HIA at national and regional levels.

The key facilitating factors were: clear political support; training (basic/advanced) and skills development; links with public health institutions and academics; sharing experiences through, and obtaining support, from subnetwork; prior implementation of intersectoral collaboration; and a favourable national context (legal and institutional).

The key challenges identified were: understanding the health determinants approach; understanding HIA as a methodology; tangible political support for conducting HIA; statutory backing; capacity and capability to conduct HIA; and having resources in languages other than English.

Phase V focused on health and health equity in all local policies. HIA was no longer a core theme. There is the potential for new opportunities for implementing HIA as a consequence of Adelaide Statement on health in all policies. In Phase V evaluation (realist synthesis approach) focused in part on HIA. The key findings of the evaluation was that the barriers/facilitating factors identified in the Phase IV evaluation were confirmed; there was refining of the implementation and expectations of HIA by cities; the accreditation process of the Healthy Cities network was used as a leveraging factor for adoption of HIA; and there was further implementation of HIA in healthy urban planning and design.

Healthy Cities work on HIA has shown the value and effectiveness of a network approach to HIA implementation; having HIA as a core theme boosted greater participation and further implementation of HIA; high levels of time, money and staff resources are required to implement HIA in a sustainable way; there was limited HIA/health integration into other impact assessments approaches; and there are further opportunity for embedding and anchoring HIA thanks to continuing policy and work on Health in All Policies, Health 2020 and healthy urban planning.

3.9 Quality assurance for HIA and health assessment in EAs

B Cave, Ben Cave Associates Ltd.

Impact assessment has been defined as both a technical tool for analysing the consequences of a planned intervention and a legal and institutional procedure linked to the decision-making process of a planned intervention.⁸ This dual role spans the design process and the regulatory process.

Many of the presentations in this seminar have noted how the use of HIA is growing, slowly in some jurisdictions, and faster in others. As the assessment of health and well-being becomes more widespread, either as a standalone HIA or as an integral part of one of the subsets of Environmental Assessment, so will the findings that emerge from the assessment of health come under greater scrutiny. How can a commissioner be confident that the findings of an HIA are fit for purpose? The quality of the assessment thus assumes greater importance.

The story of HIA is characterized by variety. This variety can be seen in terms of the organizations that commission the assessment and in terms of the type of policy, plan, programme or project on which it is carried out and the values that inform the approaches used.⁹ The practice of HIA is growing and we have (always had) a profusion of guidance. Quality is ethereal. It is a contested and negotiated concept. We need to be clear about the standards of quality in HIA if the process is to be improved and enforced and the findings are to be seen as robust. There are many lessons that can be exchanged with Environmental Assessment (EA). The intersectoral nature of HIA and health in EA is an added challenge.

Quality has a number of definitions. In the context of IA an appropriate definition is “The standard of something as measured against other things of a similar kind; the degree of excellence of something”.

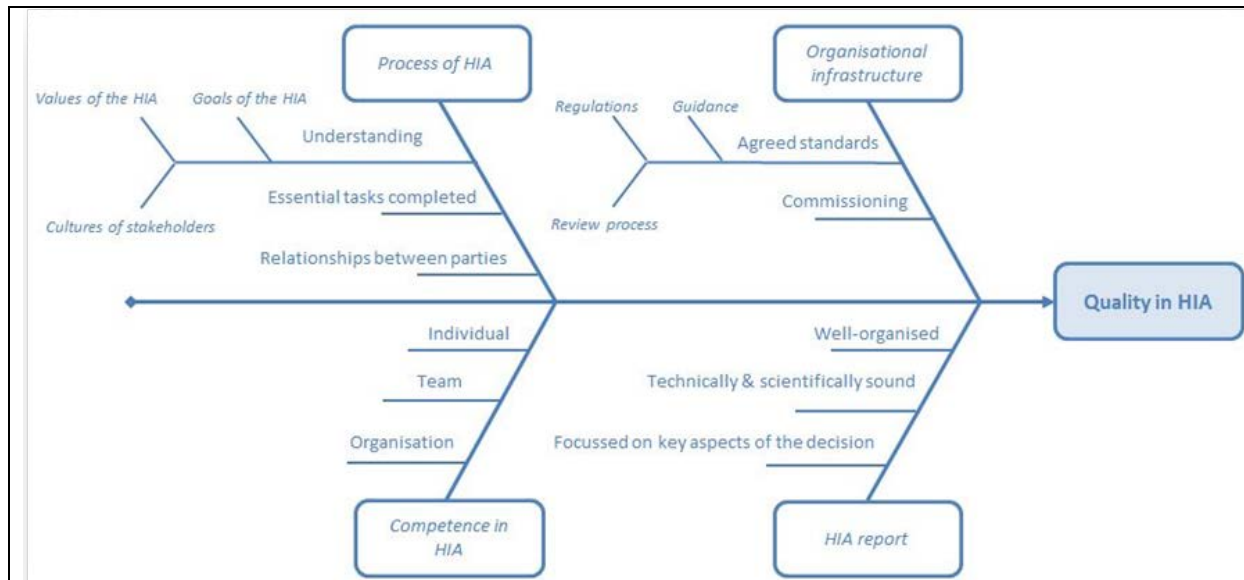
⁸ IAIA. What is impact assessment? Fargo, ND, USA: International Association for Impact Assessment. 2010. <http://bit.ly/XHuar6>

⁹ Harris-Roxas B, Harris E. Differing forms, differing purposes: a typology of HIA. *Environmental Impact Assessment Review* 2011; **31**(4): 396-403. <http://dx.doi.org/10.1016/j.eiar.2010.03.003>

Fig. 1 provides an overview of components of quality in HIA. This includes:

- the process of the HIA;
- the competence of the individuals who are, and the team that is, conducting the HIA;
- the organizational infrastructure within which HIAs are commissioned and prepared; and finally
- the HIA report itself.

Fig. 1. Components of quality in HIA



Source: B. Cave. Reviewing the quality of an HIA. Course unit: NCHPP HIA online training course. Montreal, Canada. 2013

These components apply to the system within which HIAs are conducted as well as to individual impact assessments. We look below at ways of reviewing HIA (or IA) reports and at ways in which the system within which the assessment is conducted is important for consistently producing quality.

A North American guide *Minimum elements and practice standards for HIA*¹⁰ sets out what should be in an HIA. It establishes parameters for an HIA but the guide is not explicitly set up to enable a review of a completed HIA. A review package for HIA reports of development projects¹¹ was developed to enable commissioners of an HIA to determine if the completed report is fit-for-purpose. It is based on similar tools for EIA¹² and involves two reviewers rating a report across a range of criteria and giving a consensus grade on its quality. Tools such as these provide a way of concluding on the quality of an impact assessment and allow experts and non-experts alike a way of

¹⁰ North American HIA Practice Standards Working Group. Minimum Elements and Practice Standards for Health Impact Assessment (HIA). Oakland, California, United States: North American HIA Practice Standards Working Group. 2010. <http://bit.ly/XviXqZ>

¹¹ Fredsgaard MW, et al. A review package for Health Impact Assessment reports of development projects. Leeds, UK: Ben Cave Associates Ltd. 2009. <http://bit.ly/k63NtC>.

¹² Lee N, Colley R. Reviewing the quality of environmental statements. Manchester: EIA Centre, Department of Planning and Landscape: University of Manchester. 1992. <http://bit.ly/ZanCOW> and Lee N, et al. Reviewing the quality of environmental statements and environmental appraisals. Manchester: EIA Centre, Department of Planning and Landscape: University of Manchester. 1999. <http://bit.ly/17eVrWh>.

scrutinising an assessment. The focus on the quality of the written record of the assessment (e.g. the report) can overlook other important aspects such as public participation¹³ and the process of the assessment.

The Institute of Environmental Management and Assessment (IEMA) in the United Kingdom focusses on the organization that coordinates EIAs. IEMA provides a quality mark for organizations.¹⁴ Membership of this scheme is important for United Kingdom consultancies to demonstrate competence in EA. The IEMA process examines a range of competencies that apply to the organization and the team as well as to the reports themselves.

These components do not guarantee the quality of any one HIA but paying heed to them is likely to create conditions within which good quality HIAs can be prepared and they should be considered as the use of HIA continues to grow.

4 National experiences with HIA and health in EAs

4.1 The Wales HIA Support Unit

L Green, Wales HIA Support Unit

Wales has a national government and the devolved powers include the ability to legislate on health, planning, social services and social care through Acts passed by the National Assembly. Policy priorities include health and well-being, addressing inequalities within the population, sustainable development, citizen centred public services, partnership working and having an integrated agenda.

Health and well-being is an important priority because Wales exhibits high levels of poor health; increasing rates of obesity and associated illness (diabetes, heart disease and respiratory disease); higher levels of tobacco smoking and alcohol drinking; and large health inequalities in health (deprived communities exhibit higher levels of ill health and have shorter life expectancy than more affluent communities). The emphasis is not just on physical health but the whole range of determinants of health and mental well-being.

The Wales HIA Support Unit (WHIASU) was established in 2004 and is funded by the Welsh Government. It is now part of Public Health Wales's Policy, Research and International Development (PRID) Directorate. It has three officers (one full time and two part-time) with a wide ranging brief that includes training, facilitation of HIAs, advice and guidance on HIAs and providing resources for HIA. Since 2004 over 150 HIAs have been completed in Wales, ranging from comprehensive high profile and contentious ones through to local level and community HIAs.

The key strategic legislative drivers for HIA and Health in All Policies have been One Wales: A Progressive Agenda for the Government of Wales (2007); Our Healthy Future (Public Health Strategy for Wales, 2010); Fairer Outcomes for All (Public Health Strategy for Wales, 2011); the Well-being of the Future Generations of Wales Act (2015); and the Welsh Public Health Bill (forthcoming/2016).

¹³ Pöder T, Lukki T. A critical review of checklist-based evaluation of environmental impact statements. *Impact Assessment & Project Appraisal* 2011; **29**(1): 27-36. <http://dx.doi.org/10.3152/146155111X12913679730511>

¹⁴ IEMA. EIA Quality Mark: Applicant Guide. Lincoln: Institute of Environmental Management and Assessment. 2012. <http://bit.ly/14TmXcn>.

Other successful planning-related levers for HIA have been Mining Technical Advice Notes 1 and 2 (MTAN 1, 2004, and MTAN 2, 2009) for quarrying and open cast mining which requires EIAs of mines to carry out a broad HIA; Welsh Transport Appraisal Guidance (WelTAG, 2008); Wales Waste Strategy and Collections, Infrastructure and Markets Waste Sector Plan (2012; Vibrant and Viable Places: Welsh Regeneration Framework (2013); Active Travel Act (2014); Planning Act (2015) and Planning Policy Wales (PPW) for local development plans (LDPs) and SEAs; and the National Health Service (NHS) Wales Infrastructure Investment Guidance (2015). The implementation of HIA has involved national and local level training of a broad range of stakeholders and policy-makers, environmental health officers, planning officers and public health practitioners; leading and facilitating the practical application of HIA to demonstrate its value, its principles and methods, the role of community consultation and involvement; and to develop HIA capacity; development of a range of resources including HIA guides; evidence reviews; papers and briefing notes; and advocacy and championing of HIA and its use at the national level (Welsh Government) and local levels (Local authorities and health boards as well as the third sector NGOs).

MTAN 2 planning guidance on open cast mining determines that a broad HIA has to be undertaken as part of a mandatory EIA for a planning application. One example of HIA in EIA is for the proposed extension to Margam open cast mine a community led HIA was undertaken that was supported by WHIASU and the local public health team. A comprehensive HIA was undertaken that assessed the wider determinants of health and well-being and inequalities. It became a best practice model and template for future HIAs within EIA.

A second example was the proposed extension of Nant Llesg open cast mine (2015). This was proponent (developer/promoter) led and was undertaken by private environmental consultants commissioned by the proponent. The HIA was heavily criticised by the community. Therefore, the local environmental health and public health teams wanted WHIASU to undertake a quality review of the HIA. The review found that though overall the HIA was adequate it had gaps (very little discussion and assessment of inequalities); was difficult to navigate (it was an integrated environmental, social and HIA of 18 chapters); was technical and environmental health focused; and lacked the direct involvement of community stakeholders.

The issues and challenges that have emerged over time in WHIASU's work have been: the knowledge and interpretation of HIA and health and well-being (physical and environmental definition of health rather than a social definition that includes inequalities); the way issues are discussed and assessed in the report as well as what is not discussed especially inequalities; a lack of local knowledge and context; little technical expertise in HIA; capacity constraints within WHIASU and local public health teams as well as in commissioners and local authority planning officers; proponent (developer/promoter) bias against HIA as "health" has a negative connotation (a sensitive topic that is likely to delay or stop their project); and political and economic pressure.

The new 2014 EIA Directive that will come into force fully in 2017 is an opportunity to focus on broad health and well-being and not just "health" (for example through developing knowledge and undertaking training for environmental health teams); emphasize the added value of public and community involvement; and dispel misconceptions around the HIA process by showing that it focuses on the potential positives not just risks and detrimental impacts. WHIASU is in discussions with the Welsh Government about how it can provide supporting guidance for this.

4.2 HIA in the National Public Health Act of Slovakia

K Halzlova, National Institute of Public Health

The current legal framework for HIA in Slovakia is twofold.

On the health sector (Ministry of Health) side there are two pieces of legislation: the 2011 Act no. 355/2007 on public health which was modified in 2014 and the Ministry of Health Ordinance no. 233/2014 on HIA. The Public Health Act states that the obligation to undertake a HIA is the responsibility of proponents (submitter of proposals) when public health authorities consider that HIA is needed and it describes the certification process for persons who conduct HIAs. Article 52 states that

... individuals, entrepreneurs and legal entities are obliged to ensure assessment of health risks from environment or impact on public health if it is proved that the proposed activity may have a significant impact on public health and the competent authority requires an assessment of public health carried out.... .

The ordinance details the content and structure of a HIA, when it should be undertaken and who should undertake it.

Previous to this, between 1967 and 2011, the assessment of public health impacts was based on assessing whether public health standards (limits established in the legally binding regulations) for drinking-water, food, noise, electromagnetic field and indoor and outdoor air pollution were met. The approach was technocratic with the advantages of an easy and fast approach and the disadvantages that if no standards (or limits values) were affected then no assessment was undertaken.

Before the HIA legislation discussed above on the environmental (EIA/SEA) sector side the main piece of legislation that considered health was the Act no. 24/2006 on EIA. Integration of health was added after the EU EIA/SEA Directives were adopted into EIA/SEA legislation in Slovakia. The advantage of this addition was that health was included. The disadvantage was that mandatory EA was carried out only on selected activities specified in the act; there was little understanding of what health assessment meant, EIA/SEA assessors were not trained in health and there was weak knowledge of community health issues. HIA under EA were very limited as there were no rules on how to do it.

The path from the old approach to the new approach with health assessment of plans, programmes and projects included the series of ministerial conferences on environment and health from Frankfurt to Parma; governmental commitments to strengthen environmental and health policy in Slovakia especially the methodology for HIA (through the National Environmental Health Action Plan (NEHAP) and the Childrens' Environmental Health Action Plan (CEHAP)). WHO also supported the transformation through the Biennial Collaborative Agreement among the WHO Regional Office for Europe and Ministry of Health of the Slovak Republic (http://www.euro.who.int/__data/assets/pdf_file/0006/131757/SVK_BCA_2010_11.pdf).

HIA legislation involved three phases: obtaining policy support at the governmental level through NEHAP and CEHAP; creating the conditions for legislation by setting up a working group for the development a strategy for introducing HIA, a specification of needs, engaging partners, discussions, advocacy and fostering of HIA inside public health authorities, national workshops and seminars in key sectors and with key decision-makers and stakeholders, strengthen existing capacity of the 36 regional public health authorities through workshops and a two year training programme, and establishing conditions for the authorization/certification of HIA assessors (UVZ is the national body that authorises of assessors); and implementing HIA (HIA in practice).

There is no monitoring of HIA reports at the central level. Approximately, 12–15 proposals have had HIAs undertaken. These included industrial parks, manufacturing batteries, waste incineration plant, pyrolysis, thermal power, pulp processing and agriculture (large pig farm). One draft strategy document has also been assessed (Strategy for development of transport system in eastern part of Slovakia for 2030).

The key barriers to HIA implementation were overcoming the mistrust and doubt of public health professionals in public health authorities. Many issues were raised including why we need HIA, who will do it, the need for clear rules on how to conduct HIA and concerns about changing existing working routines and practices. Concern was also expressed by other sectors, Ministry of Environment, business, that decision-making processes within the EIA would take longer. Many public health and environmental stakeholders also considered that the current EA process was sufficient.

For long term viability HIA needed to have HIA legislation as full acceptance takes time and there needs to be a strong focus on the future benefits of implementing HIA and on building capacity.

4.3 Public HIA (PHIA) in Lithuania

D Zukiene, Ministry of Health

HIA in Lithuania is a separate procedure and is integrated into the EIA process according to the 2011 EIA Directive (2011/92/EU) on assessment of the effects of certain public and private projects on the environment and into the SEA process according to the 2001 SEA Directive (2001/42/EC) on certain plans and programs.

HIA as a separate assessment has been in force since the 2004 Law on Public Health. HIA is carried out on proposed economic activity. The definition in the law states that a public HIA is the process of determining, describing and assessing the effects of public health determinants of a proposed economic activity on health. A public HIA must be undertaken in order to commence or expand an economic activity which may pose a risk to human health. It also states that when preparing documents for the EIA of a proposed economic activity, territorial planning document or design documentation for construction works, natural and legal persons shall carry out a public HIA in accordance with the procedure laid down by the 2004 public health law.

When a public HIA is carried out for a project that is not covered by the EIA Law then the procedure for carrying out the HIA shall be established by the government or an institution authorised by it, in this case authorities overseen by the Ministry of Health are responsible authorities. In cases where a public HIA is as part of an EIA then it is carried out in accordance with the procedure laid down by the EIA Law and other environmental legislation. In such cases the approach to undertaking the HIA (methodological instructions) are approved by the Minister of Health.

The Ministry of Health published methodological guidance on how to carry out HIA and the steps in the separate HIA process in 2004. Separate HIAs are undertaken if the economic activity is on an approved list of economic activities and if the EIA screening has concluded that an EIA is not required. Since 2011 HIAs have been undertaken when the boundaries of sanitary protection zone (SPZ) for economic activities shall be established and if in the EIA screening procedures is concluded that the EIA will not be carried out. An SPZ is a registered buffer zone of land between industrial

activities and the wider environment to protect people and the environment from the potential pollution from the industrial activity. The boundaries of SPZs can be modified (by increasing or decreasing them) by the findings of a HIA or an EIA procedure. In cases where a separate HIA is being undertaken the key stakeholders are the proponent (developer/promoter), the competent decision-making authority (public health institution) and the local community (public).

There is currently a lot of methodical guidance on how to conduct a HIA. Various methodological recommendations have been developed for the assessment of environmental (health) risk factors through the usage of EU Structural Fund Project from 2010 to 2013.

For HIAs that are part of EIAs. EIA procedures are regulated by the EIA Law and associated secondary legislation since 1996. There is legislation and methodical guidance from the Ministry of Environment on how to conduct an EIA. When EIAs are conducted, the process involves the proponent (developer/promoter); the competent decision-making authority (authorities of the Ministry of Environment); competent authorities responsible for health protection, fire protection, protection of cultural property, municipalities; and the community (public).

SEA procedures are regulated by government decision since 2004. When SEA is conducted, the process involves the proponent (developer/promoter); authorities of the Ministry of Environment; authorities of the Ministry of Health; the authority on protected areas, cultural heritage services; and the community (public). The SEA decision is adopted by the proponent. The so-called SEA manager was prepared by Lithuanian and Finnish institutions in 2006.

The EU Structural Fund Project “Development of HIA in Lithuania” was carried out between 2010 and 2015. The goals of the project were to: evaluate HIA development in Lithuania; prepare HIA improvement and development tools; and strengthen various areas of professionals’ capacity to carry out HIA. A range of outcome and outputs were delivered by the project. These included: recommendations and publications; development of models, training programmes and manuals; and training for professionals. A total of 27 documents (so-called HIA manager; HIA methodical recommendations for different economy sectors (for example, airports, road infrastructure, wind power plants, waste processing and livestock complexes); an SEA and HIA model; and strategic HIA methodical guidelines in the environmental sector, the energy sector, national, regional and local territorial planning documents, transport and tourism sector strategic documents).

Screening and scoping steps are not undertaken when HIA is conducted as a separate process. Screening and scoping are undertaken when HIA is conducted as part of an EIA and SEA process. Similar data and assessment methods are used in separate HIA and HIA in EIA reports. The principle is to assess equivalence with the environmental limit values (for example, for air, water and soil pollution and noise) and to assess other health determinants using quantitative and qualitative methods.

In 2010, requirements came into force for HIA practitioners who conduct the HIA, and produce a final report, to be licensed either as a natural or legal person (consultant person or company). The lead practitioner must have a higher degree, master’s or bachelor’s, in biomedical sciences or equivalent (for example in sanitary, hygiene or epidemiology) and have at least 5 years of experience in the field of HIA or must have attended 72 hours (if they have a master’s qualification) of training in HIA approved by the Ministry of Health or 120 hours of training (if they have a bachelor’s qualification). The practitioner must attend at least 36 hours of continuing training courses in the field of HIA every 5 years.

There are no requirements for a consultant person or company to have a license when HIA is conducted in the EIA and SEA process. EIA reports may be prepared by a person with higher education degree or equivalent qualification in the field. SEA reports may be prepared by the organization developing the plan or programme or by natural or legal persons (consultants). There are no requirements for the person to have higher education degree or equivalent qualification or a license.

4.4 HIA in Austria

G Gruber, HIA Support Unit

HIA in Austria is being developed and implemented in five key areas and four phases.

The five key areas are: organizational development (setting up of a HIA support unit, web site and newsletter); workforce development (HIA training, university curriculum development, development of a HIA guide and pilot projects); resource allocation (finances for the setting up of a HIA support unit and finances to carry out HIAs); partnerships (develop a country-wide HIA network; develop international links; and attend key HIA-relevant conferences); leadership (make key policy-makers familiar with HIA and support the development of HIA trained staff in all key institutions).

Phase 1 (2010-2015) focuses on awareness raising so that HIA is recognized as an essential part of a broad health-promoting policy. A common understanding of HIA and the benefits and opportunities of HIA are promoted. This shall be achieved through the establishment of a national HIA support unit at the Gesundheit Österreich GmbH (Austrian Public Health Institute). The unit supports the planning and carrying out of HIA, provides guidance and information material on HIA, distributes a quarterly newsletter and maintains and updates a national HIA web site (<http://gfa.goeg.at>, contact gfa@goeg.at). In addition a national HIA network was set up in 2010 that includes decision-makers at federal ministries, social insurance providers, provincial governments and HIA experts. This network participates in pilot-HIA and in the development of HIA guidelines and the exchange of knowledge and experience. A HIA steering committee was set up in 2013 with the objective of providing strategic supervision for the implementation of HIA in Austria. This steering committee includes key decision-makers and meets on a regular basis.

In Phase 1 developed training programmes were developed that describe the measures and resources (offers) needed to develop human resources necessary for HIA. The aim of this is the systematic creation and further development of knowledge necessary for the carrying out of HIAs. Guidelines for practice have also been developed to provide instructions for carrying out an HIA, the basic theory of HIA, case studies, recommendations for practice, online resources and a glossary. The objective of this is to establish a common and standardised approach to HIA in Austria.

Examples of HIAs that have been carried out in Austria include a national pilot HIA for a mandatory year of kindergarten (the published report discusses the findings, experiences, evaluation, quality review and approach to participation used) and other regional/provincial HIAs (kindergarten as meeting point for families (Vorarlberg); housing that can be changed into attended housing in Minihof-Liebau (Burgenland); full-time school (Styria); and renovation of a public space in Kapfenberg (Styria)).

Phase 1 has also included presentation of HIA-activities at national and international events; publication of professional articles; networking with national and international HIA experts;

National, HIA conferences in cooperation with partners from the national HIA network took place (2001, 2014 and 2015); HIA courses are held every year and across a year as well as international public health summer schools on HIA (2011 and 2012).

The report on planning the implementation of HIA in Austria says that Phase 2 (2016) will focus on adoption of HIA. In this phase HIA structures will be further developed and financed and HIA will be carried out in more sectors.

Phase 3 (2017-2020) will focus on implementation of HIA. In this phase intersectoral cooperation and HIA are recognized and approved of as good practice by public (and private sector) institutions and organizations.

Phase 4 (2021 onwards) will focus on institutionalization of HIA. In this phase HIA will be established as a mainstream approach and tool for decision-making and is integrated into the budget law.

A reflection process took place at the end of Phase 1 (2015). It includes feedback from the HIA network and the steering committee but also internal reflection of the HIA support unit team. The main conclusion was that a lot of structures and processes for supporting the implementation of HIA in Austria were established but in certain aspects we have to continue the work. In the next step a reorientation and specification of Phase 2 has to be done.

The basis for HIA can be found in Austrian policies and strategies, specifically: health targets for Austria; strategy for the health of children and youth; strategy for the promotion of health (part of the Austrian Health Reform); national strategy on public health; health targets of Upper-Austria; and the strategy for the promotion of health in Styria. HIA is mentioned in these policies and strategy in relation to helping to achieve targets but there is no legal obligation to carry out HIAs.

EIA (dt. Umweltverträglichkeitsprüfung, UVP) in Austria are compulsory for some specific projects. SEA (dt. Strategische Umweltprüfung, SUP) is also compulsory for some specific policies, plans and programmes. EIA and SEA screening is focussed on environmental issues and health is often reduced to “biophysical impacts”. There is a need, or perceived need, for “hard data” to meet legal requirements and withstand legal challenge. Integration of HIA into EIA is not easy and needs more time, money and expertise and the benefit of doing this are not currently realized.

Current obstacles to implementing HIA in Austria include: a lack of a comprehensive understanding of health and the use of health determinants is challenging when implementing HIA in practice; English terms are inhibiting factors when introducing and implementing new instruments; the delimitation of existing instruments is necessary (e.g. Health Technology Assessment (HTA), EIA, SEA); and when establishing HIA, the creation of awareness is a central issue and has to focus on the health sector first.

The capacity-building model used is adequate for the creation of capacity in Austria. The experiences gathered through carrying out an HIA have been helpful in supporting the work of the support unit; information material on HIA (for example, factsheets and guidelines) aims to create a common understanding of what HIA is; networking among HIA users and HIA experts works well and there is positive cooperation which helps to prevent redundancy; next years' challenges will be to build further capacity in HIA leadership and resources; and decision-makers have to be made aware of and sensitized to the benefit of HIA especially by carrying out desk-based and rapid HIAs and the nomination of HIA champions (agents) in federal ministries.

4.5 The Netherlands Commission for Environmental Assessment

R Meeuwssen, Netherlands Commission for Environmental Assessments (NCEA)

The Netherlands Commission for Environmental Assessment (NCEA) advises on the scope and approach to EA (EIA and SEA) and reviews the quality of information provided in an EA report. Its key principles are transparency, expertise and independent. It has independent experts on environment, noise, air quality, odour (smell) risk management, nature, landscape and public health. It also has a knowledge dissemination role through a web platform that includes a web site on health in EA, on spatial planning detailing methods, on environmental aspects and phases of decision-making (<http://gezondheid.commissiener.nl>).

An example of the inclusion of health issues into an EA supported by NCEA is the Hague Transport Plan, a new plan on transport looking into cars, public transport and bikes. The SEA of the plan considered air pollution (CO₂, NO_x and PM₁₀), noise, road safety, the ambition of the city of The Hague is to have health as a precondition for planning. The plan/SEA researches different alternatives such as types of road accessibility (ring, grid and gateways), different modalities (car, cycling and public transport), technical systems (active traffic management and adaptive green lights), road pricing (tolls) next to the preferred alternative.

The advice of the NCEA was to present contour maps of air quality and noise, present the (number of) people and sensitive objects (schools, day care centres, old people's homes) exposed, compare the alternatives with the reference (preferred option) and to assess the quantitative health effects using information on exposure-response relationships.

Key health issues in the SEA were the potential noise nuisance from traffic (numbers of inhabitants in homes experiencing annoyance and sleep disturbance); increases in air pollution along certain routes in the city; the plans aim of reducing CO₂ emissions by 30% by 2020 (using 1990 emissions as the reference baseline); and the plans aim to shift from the use of the private car which had increased since 2008 by increasing the use of public transport and cycling. The findings of the SEA were that the proposed policy of a new ring road was likely to expose more people to noise and air pollution and increase CO₂ emissions. The healthiest alternative was road pricing but road pricing has been banned by the national government.

The lessons learnt from undertaking The Hague Transport Plan SEA was that it provides useful information for the decision-makers on environment, health and policy ambitions; that SEA needs to be started earlier in the process; and that the advice provided by the NCEA and the public health service helped to identify the most appropriate scope and methodology for carrying out HIA in a SEA.

The barriers and challenges identified were competent authorities seeing the consideration for health as a new, additional barrier to implementing proposals (more "no go" and creating a new norm); health knowledge and information is scattered; and tensions between the potential benefits of development and the potential adverse effects on community health.

The opportunities identified were that spatial plans can be developed in ways that stimulate and promote healthy behaviours; that sharing information with decision-makers can increase the awareness of the health opportunities of proposals; and that monetising the potential benefits of health may make health a more salient issue for decision-makers.

The value of health in EA in the Netherlands has been the integration of sectoral environmental policy and sectoral laws. In most areas environmental standards (limit values) are met but the effect on human health of lower levels of air pollution and noise is still substantial. Cumulative effects are

generally not taken into account. More health engagement in urban planning offers a chance for improving human health and is likely to increase participation and support for plans and projects.

NCEA advises on large scale projects with large number of exposed population (for example, infrastructure, airports and urban planning); community and public concerns about health effects (for example in relation to industrial farming and windfarms); and where the effects are unknown and highly uncertain (for example, high voltage pylons and shale gas). The methodology recommended depends on the type of policy, plan or project; the level of information needed; the phase of decision-making; the alternatives being assessed; the likely mitigation that will be needed; the likely cumulative effects; and the opportunities for preventing illness and stimulating healthy behaviour.

HIA methodologies and method that have been used in EIA/SEA include: quantitative (disability adjusted life years, MGR, number of inhabitants exposed, dose-effect relationships), qualitative (GES screening, describing), visualization (contour maps) and expert judgement. In EIA/SEA health is considered by describing the reference situation, that means the current health situation; identifying the number of houses (and hence people) likely to be affected; visualization through the use of impact maps (GES, contour) and translating these into likely health effects; potential for in-combination and cumulative impacts (do any effects reinforce each other either in the proposal or in relation to other proposals); a review of alternatives and the proposed mitigation measures; considering both health protection, disease prevention and health improvement. In the Netherlands HIA has been applied to a range of plan and project types: infrastructure, trains, road, airports; factory farming (pigs, poultry, cattle); windfarms; urban planning and industry; shale gas; and high voltage pylons.

Some examples of HIA are the urban planning of houses in Utrecht province, the Utrecht Ring way and the Highway A15 Arnhem to Nijmegen.

On the NCEA web site a factsheet on health in EA (<http://api.commissiemer.nl/docs/mer/diversen/keysheet13.pdf>) and one on the NCEA's advice (<http://api.commissiemer.nl/docs/cms/FS%2016%20Advisory%20procedure%20NCEA%20ENG%20Final.pdf>) can be found.

4.6 Health effects in EAs in Germany

J Hartlik, Office for Environmental Assessment and Quality Management

In Germany there is no legal basis for HIA at the federal level. The legal basis for health in EIA is the Federal EIA Act. Article 2 stating that EIA comprises the identification, description and evaluation of the direct and indirect project impacts on i) human beings, including human health; ii) flora, fauna and biological diversity; iii) soil, water, air, climate and landscape; iv) material assets and the cultural heritage; and v) interaction between these factors.

Despite 25 years of EA (EA, i.e. EIA and SEA) experience there continues to be a lack of good methods for assessing health effects within EA. To date HIAs have been limited to rare cases and are not regularly undertaken alongside or integrated within EAs. Human health is mostly considered alongside environmental factors such as air, water and soil pollution and the transmission of harmful substances through them. Compliance to air, water and soil standards (value limits) is judged by regulators to be sufficient to manage public health issues related to plans and projects. There has also been no satisfying way of operationalizing vulnerable groups; hardly any use of (higher)

standards than the national legal limits in assessments or decision-making; and no good approach to cumulative impacts and positive impacts.

The indicators used to consider and assess health are often poor and limited to simple overlays of data on Graphical Information System (GIS) maps. Examples of indicators include noise isophones for urban settlements/housing areas affected by a project and greenspaces (recreational areas) dissected by roads per metre of road. GIS maps tend to provide three layers of information: a database layer showing land use such as housing, industry and greenspaces; impact zone layer showing the spatial emissions in general; and an effects or conflicts layer showing areas affected by direct loss or level of emissions by sensitivity of the area.

There is no regular participation of health authorities in EIA while within SEA health authorities have to be involved regularly as it is a legal requirement. However, all in all, health authorities have little experience in commenting on the health aspects within the legal framework of EIA and SEA. In addition both instruments are connected to the national legal standards, therefore only health effects which can be linked with those standards being affected will be part of the final decision-making process.

In recent years work has been undertaken to improve the practice and use of HIA. A working group of the German EIA Association in cooperation with the North Rhine-Westphalia (NRW) Centre for Health (Landeszentrum Gesundheit – LZG NRW) have developed a guidance document. The working group is made up of medical doctors and health scientists; planners and engineers; social scientists; geographers and climatologists; human toxicologists; and environmental scientists. The guidance provides support for all actors within EAs especially health authorities. It provides methodological guidance and information such as a compilation of ambitious national and international standards and thresholds from around the world for vulnerable groups that go beyond existing legal standards and thresholds used in Germany. Recommendations are also made on what standards and thresholds to use.

The guidance focuses on five broad categories of determinants: chemical, physical, biological, natural, and social environment. It discusses potential health effects of changes to these determinants, useful indicators and the scales and standards that could be used to assess and monitor health effects. The guidance provides an introduction to tools and procedures such as HIA; quantitative health risk assessment; human biomonitoring; impact assessment and sustainability assessment; climate proofing and vulnerability assessment; and local community level health plans.

The next step for the working group is to prepare sector and project specific guidance on for example infrastructure projects and land use and spatial plans.

There is a need to expand the perspective of EAs in Germany. This includes having and using a more comprehensive understanding of health, integrating social as well as the environmental determinants of health, adequate consideration and assessment of the impacts on vulnerable groups; and more measures and approaches to how health is considered in EA.

4.7 Opportunities for HIA and health in EA in the Russian Federation

M Khotuleva, Ecoline Environmental Assessment Centre

Environmental assessment in the Russian Federation between 1995 and 2007 was an expert-based system. There were two parts to the system, for project proposals, a proponent (developer/promoter) undertakes an EIA (OVOS) and a competent authority review (State Environmental Review) of the EIA report. This was followed by a State Review. For strategic proposals, there was sometimes an SER followed by an Agency-level Review.

Since 2007, there are almost no State Environmental Reviews for projects anymore. Project-level OVOS are obligatory but they do not need to go through an approval system. In contrast, the process for SEA is unchanged.

The legal and regulatory (and methodological) basis for EA and HIA are the following: internationally the Espoo Convention has been signed but not been ratified and the Aarhus Convention and SEA Protocol have not been signed; nationally the Environmental Protection Law (7-FZ, 2002) provides the basis for EA and the Population Hygiene-Epidemiological¹⁵ Well-being Law (52-FZ, 1999) provides the basis for HIA. The regulatory and methodological basis for HIA are the health risk assessment guidelines for chemical pollutants (MP 2.1.10.1920-04); health risk assessment guidelines for electromagnetic fields, EMF up to 300GHz (MP 2.1.10.0061.12); and the quantitative health risk assessment of non-carcinogenic chemical pollutants using evolution models (MP 2.1.10.0062-12).

For health assessment several key concepts are in place in Russian legislation and practice: Legal environmental standards and thresholds are working i.e. being implemented and achieved. The public health focus is on “no disease” i.e. on not generating disease. Impact assessments on public health are based on public health (hygiene) standards. Sanitary protection zones (SPZ) as a mitigation measure provide a buffer for potential pollution effects on communities.; quantitative health risk assessment of chemical pollutants (often used to justify the creation of a SPZ); qualitative assessment for other health-relevant issues; standards of so-called social infrastructure provisions i.e. the number of social services per capita; whether there is public concern about a proposal; more recently, international Financial Institution (IFI) requirements and performance standards add new concepts.

The case study of the Boguchanskaya Hydropower Plant in the Russian Federation provides an example of how a health assessment (HA) within an EA informed the development of this project. For the construction and operational stages health effects in the on local communities were identified along occupational health impacts. The potential health effects identified in the construction stage on the community were those associated with labour migration e.g. “social diseases” such as communicable disease, crime, drug addiction, hard drinking (alcohols) and those associated with resettlement. The potential health effects identified in the operation stage on the community were local climate change impacts; parasitic diseases; change in water quality and use; changes in living conditions and lifestyles; need to improve health care services; and the need to promote healthy lifestyles.

¹⁵ Hygiene and sanitary are the older words for what we now call public health.

4.8 Opportunities for HIA and health in EA in Georgia

N Kiladze, Tbilisi University

In Georgia the transformation of the Soviet sanitary-epidemiologic surveillance system into a more western European public health system started in 1996. Since then Georgia has set up a new public health infrastructure. In 2007, the State Sanitary Inspection System, which was responsible for monitoring the environmental quality and the enforcement of sanitary-hygienic regulations, was abolished. The functions were delegated to the different ministries and local public health authorities. In the same year the Georgian Law on Public Health was adopted (27/06/2007).

The Public Health Law focuses on the following issues: elaboration of norms and regulations for ensuring a safe environment; setting norms for air, water and soil composition; sound, vibration and electromagnetic radiation limits and surveillance; chemical, radiation, technology, product and workplace production safety; healthy lifestyles; maternal, child and adult health policy; control on tobacco consumption; drug addiction; and alcoholism. For example, Chapter VI on ensuring a healthy environment has two articles: Article 22 on ensuring a healthy environment states that the Ministry shall determine quality standards for atmospheric air, water, soil, noise, vibration, electromagnetic radiation, that include norms for maximum permissible concentration and exposure limits; Article 23 ensures safe water for public health. Chapter VII on chemical safety, safety of technological processes and products has three articles: Article 24 on chemical safety, Article 25 on safety of technological processes at a workplace and Article 26 on the safety of products.

The Ministry of Environment and Natural Resources Protection has the following powers related to environmental health issues: organizing soil, water and air pollution monitoring; developing and implementing a unified state policy in the field of natural resources; monitoring atmospheric air quality in populated areas; noise, vibration, and non-ionising radiation monitoring; monitoring background radiation; ensuring dosimetry monitoring at facilities using ionising radiation; licensing activities related to nuclear power and radiation; coordinating with the key stakeholders and ministries during chemical emergency response activities.

The Ministry of Agriculture has the following powers related to environmental health issues: developing and implementing a food safety policy; controlling compliance with food safety requirements; registering pesticides and agrochemicals; implementing state supervision of transportation, sale, and storage conditions of pesticides; control the compliance of drinking-water safety parameters and quality with the requirements established by the legislation; and carry out external, random laboratory testing of drinking-water.

The Ministry of Labour, Health and Social Affairs (MoLHSA) and the Ministry of Education and Science jointly determine public health (sanitary and hygiene) norms for educational and childcare and combined institutions.

The Ministry of Defence and the Ministry of Internal Affairs supervises the compliance with sanitary and hygiene standards and undertaking preventive measures within the Armed Forces of Georgia, the military services of the Ministry of Internal Affairs and the State Security Service.

The first Georgian National Environmental Health Action Plan (NEHAP-1) was adopted in 2003 by presidential decree (24th March 2003, Decree of the President of Georgia, N326). However, due to the reforms in health care system implementation of NEHAP-1 became impossible.

A new NEHAP-2 is being developed to meet one of the conditions of the Association Agreement between the European Union and Georgia. The responsible institutions are the Ministry of Labour,

Health and Social Affairs and the LEPL National Center for Disease Control and Public Health. An interagency working group on the new NEHAP-2 was formed and the plan was approved under Order No. 06-213/o by the General Director of the LEPL National Centre for Disease Control and Public Health, on the 14th November 2014. WHO ECEH is supporting Georgia to develop the NEHAP-2 through different workshops and meetings with key stakeholders and WHO ECEH experts.

The NEHAP-2 multisectoral working group provided two days of training in June-July 2015 for the NEHAP-2 NWG members. The objectives of the training were to share expertise and support for the development of the NEHAP-2, WHO recommendations to improve environment and health situation in Georgia, and the steps needed to enforce the Parma Declaration of the 5th European Ministerial Conference on Environment and Health, 2010, as well as commitments and approaches of Health 2020.

Georgia is currently not a party to the UNECE's Espoo Convention on EIA in a Transboundary Context and its Protocol on SEA. The country has signed, but not ratified the SEA Protocol. Thus, despite the increasing recognition of SEA and EIA as tools and approaches for sustainable development in the region, they are still rarely used in Georgia.

The Ministry of Environment and Natural Resources Protection with the assistance of UNECE EaP Green have started preliminary work on harmonising legislation, designating competent authorities and elaborating mechanisms for public awareness (In line with the Association Agreement with the EU).

In the second phase of the EaP Green development programme, November 2014 to September 2015, the Ministry of Environment is working closely with UNECE commissioned international consultants to draft a new law on EIA and SEA. It includes several drafting group meetings, consultations with other national authorities and two public participation meetings.

The outcomes of the programme were presented and discussed at the final round-table meeting to support development of a new law on September 23–24, 2015 and the draft law will be submitted to the Georgian Parliament in October 2015. Full implementation of Georgia's National Environmental Plan and the implementation of the new EIA and SEA law 2016.

Georgia is part of the EC Twinning project GE22 "Institutional Strengthening of Environmental Health System of Georgia". The purpose of the project is to strengthen the existing legal framework on environmental health in Georgia through harmonising with EU requirements, improving environmental health management, insuring long term environmental policy development and strengthening intersectoral collaboration.

The EC has also accepted Georgia's application for the EC TAIEX mission on supporting the development of a comprehensive system of the Health Care Waste Management (HCWM) in Georgia. The objective of the project is to assist the development of recommendations for strengthening the existing Health Care Waste management system.

Currently, Georgia is not conducting HIA or health in EIA/SEA, though some international organizations are performing HIA of their projects. The main reason for the lack of HIA and health in EA implementation is the absence of models and methods of implementation; specific guidelines and practical experience in the application of HIA and health in EA; no methodology guidance documents in Georgian.

For further progress to be made on implementing HIA and health in EA there needs to be staff training on how to conduct HIAs; WHO sharing what it considers are the best practices for HIA and

health in EIA/SEA; organizing a Caucasus regional conference to raise awareness and share knowledge among key stakeholders and the general public on WHO recommendation on HIA and health in EA; integration of HIA and health in EA into the public health curriculum in educational institutions; and establishing and strengthening collaborative links between German and Georgian academic staff in the environmental health field.

5 Needs and gaps

The following are summaries of the working group sessions.

5.1 What is needed for further HIA implementation and enhanced health integration into EAs?

Facilitator: S Vohra, Public Health by Design

A key theme that emerges from current discussion in the domain is what is meant by HIA or health in EA. Often health can be narrowly or epidemiologically scoped so that the focus is on impacts where there is good epidemiological evidence, which can be quantified through dose-response relationships and with a focus on medical or health-care impact. It can often be difficult to dissuade health and environment professionals from seeing health in this narrow way.

A second key theme is how intersectoral collaboration could be fostered and enhanced. The EA actors fall into three groups that are influential actors in the HIA and Health in EA process: regulators, proponents and practitioners. They can be from civil society, and public and private sectors. There is a need to work on professional cultures and to focus on two key aspects: the language that is used and how skills and experience can be developed in public health professionals to enable them to have a constructive dialogue, a “value exchange”, a negotiation with environmental stakeholders. This also links to a lack of capacity in existing public health systems of people who have the different expertise needed for the different types of development projects that may need to be considered in HIA or Health in EA. Often public health professionals do not have the time, e.g. because such engagement is not prioritized in their work programmes and by their organization, or are not interested, because it does not fit with a recognized competency that furthers their careers, in working with environment professionals. Capacity building across the region could include ongoing regional seminars and training for trainers programmes. It could also include knowledge transfer and exchange on good practice and experiences in a Chatham House rules style setting (i.e. what is discussed is confidential and participants do not write down or share discussions in an identifiable way outside of the meeting). In relation to cross-country collaboration language is often a barrier and there is a need for translating written materials and providing interpreting in seminars and training courses.

A third key theme is the need to work at the EA system level and target EA structures and institutions, EA processes and EA actors. These do not have to be at the same time but need to undertake activities to address each of these. This would involve mapping out existing relationships between the health and environment sectors and to consider where to put health in the decision-making and legislative-regulatory process. Often health is reactive and responds to specific issues or topics such as water quality, or cardiovascular or an emerging infectious disease. The health sector often provides only recommendations i.e. they are not requirements that must be implemented before a development goes ahead. Legislation and regulation can be powerful drivers for incorporating health issues in the planning and decision-making process. However often HIA and Health in EA may develop on a case by case basis.

A final theme of relevance concerns social, financial and political constraints both at national and regional levels that can mean that capacity development, awareness raising and intersectoral collaboration can take time, often a decade or more. Different conceptualizations of health and HIA across countries and different legislative and political frameworks, as well as limited financial

resources mean that HIA and Health in EIA development can be very different points both inside a country and across countries in the European Region. For example, some countries do not have SEA or similar strategic assessment.

The working group identified the following key questions and issues:

1. Can we develop a broad-based systematic approach to develop HIA at national level that can work across countries that takes account of resource constraints and varying levels of organizational and political commitment?
2. What transferable knowledge is there from the successful or partially successful approaches of some countries in the region?
3. How can health be better integrated into EA? Should there be a specific definition of HIA and how that should be used in EA? How can health agencies be involved in a mandatory rather than an informal way?
4. Is there potential for some general regional level guidance that could be used by all countries?
5. Where is the power located in the EA system and how do issues of power influence the HIA or Health in EA process e.g. consultants often have balance the needs of different stakeholders in the HIA or Health in EA, doing a good EA or keeping a good relationship with the project proponent, how can this reality be acknowledge and consultants and project proponents (whether public or private sector) supported to focus on doing a good EA.
6. How can the quality of impact assessment professionals and the outputs and outcomes of HIA and Health in EA be improved? How can we assess competency and expertise? Is a register of experts the way to go as is happening in some countries? Should there be a public agency with responsibility for quality assurance?
7. How can a sustainable network of practitioners, researchers, academics and public officials be developed that can work together to further the HIA and Health in EA agenda? How can existing networks such as EUPHA and IAIA help to support this?
8. Could developing a regional or international agenda, and linking financial and expertise support, be a way of building on, moving and aligning national agendas on HIA and Health in EA?
9. How can WHO facilitate this work on HIA and Health in EA in the European Region? Could it undertake more cross-country research and analysis and facilitation of cross-country dialogue and knowledge exchange?
10. Some key HIA and Health in EA materials must be translated into local languages to improve the diffusion of knowledge and uptake of good practice ideas.
11. How can health data be opened up across the region so that it is easily accessible for IA and Health in EA use?

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5.2 How do we comply with formal requirements and should we go beyond?

Facilitator: T Fischer, University of Liverpool

The following challenges for going beyond basic formal requirements of assessing mainly biophysical health impacts were identified:

- What can trigger that assessment goes beyond the basic legal requirements? Can it be achieved through collaborative/intersectoral pilot projects with the Ministry in charge?
- How can the value of going beyond biophysical aspect be made more explicit?
- How can the silos between sectors be turned down?
- How are HIA and EA taught/trained, where is it taught and are standards for teaching needed?
- What is needed to establish a support unit for HIA/the consideration of health in EA? And how can this unit be linked to the government/the decision-makers?
- What kind of guidance – also from WHO and the EC – is needed?
- How does HIA and further health in EA fit into the system i.e. common law versus civil law?
- How to raise the awareness on health related issues in EA further – especially in the health sector?

A key theme emerging from the discussion of these challenges is that the context is key when considering ways/methods to enhance consideration of health in EA. For example, differences in decision-making and legal are very important (legal traditions particularly between a common law – as in the United Kingdom – versus a civil law (as in most continental European systems) approach. Hence, we cannot copy a HIA system or approach from one country to another but need to adapt and modify it to fit the specific context.

Other key themes are that formal requirements to consider human health in EA requires going beyond simple bio-physical aspects to include social and behavioural aspects, and that silo thinking across professions, institutions, and processes is a barrier to health inclusive EA.

There is a need to get as many people on board on EA processes who are advocates of health inclusive EA from different organizations/administrations. In this context, the establishment of a network for health in EA would be supportive and could give a push for more consistent and systematic health in EA approaches.

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5.3 How to assure good quality HIAs and health integrated EAs?

Facilitator: B Cave, Ben Cave Associates Ltd.

Impact assessment of health should have as its highest goal the best outcome for health, which raises the questions of how this might be ensured in any single assessment (or in a system that frames HIAs), and how various components can be combined to ensure quality in HIA.

The revised EIA Directive 2014/52/EU¹⁶ amends a previous Directive and the changes include: a consideration of population and human health; a requirement that experts involved in the preparation of EIA reports should be qualified and competent; and other changes concerned with the quality of the EIA.

The intention in seeking to address health in impact assessment is to make better strategic use of public health skills and resources. The effectiveness of health input into EAs is important alongside the values and process.

In the current discussion on quality assurance the context is considered as important as it determines what resources are available in different Member States. Setting the bar for quality standards in HIA needs to be carefully done as it should be neither too high nor too low. While policy- and decision-making systems will always operate with imperfections standards can be improved, hence experts need to be able to enforce and to update standards for HIA. Nonetheless this can only be done if the standards are set in the first place.

Ben CAVE – Facilitator

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¹⁶ 2014. Directive 2014/52/EU of the European Parliament and of the Council amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment. *Official Journal of the European Communities*, L 124, 1-18. <http://bit.ly/2bfMc0s>

6 Discussions and meeting conclusions

6.1 Emerging themes

As described above, there seem to be important opportunities to move HIA and the assessment of health impacts in EAs ahead, yet several challenges also exist. Opportunities for HIA and health in EAs include the Health in All Policy Approach, the WHO Regional Office for Europe's Health 2020 policy framework, and the transition phase of the reviewed EU EIA Directive 2014/52/EU.

A key challenge is the still existing need to define what is meant by considering health impacts in policies, plans, programmes and projects – especially in the formalized process of EAs like EIA and SEA – and on what is meant by “health and well-being” from a public health professional perspective. Furthermore there is the need to be more explicit on the added value of HIA and HA in EAs, e.g. identify possible impacts on different population groups, facilitation public involvement, addressing perceived health impacts, avoiding double work, avoiding legal appeals that might become lengthy and costly, against a proposal.¹⁷

A common problem is that health authorities are often not used to giving comments on EIA/SEAs and therefore health experts often do not answer the requirements of other sectors, e.g. having enough time available and meeting timelines as they are usually already stretched in their health sector specific tasks. This as well as the different technical languages amongst health, planning and environmental experts and the still persistent so-called silo way of working and thinking in different sectors, makes it difficult for health to collaborate with other sectors.

Another challenge is that EAs are often only pollution focused, checking that limit values are observed, not considering that these limit values might still entail a health risk for vulnerable population groups. They also do not address how these risks are accumulating in the area and in the population affected. In addition social determinants are only rarely looked at and prevention aspects are not well developed in EA considerations.

The lack of legal regulations for HIA can be a hindrance in further implementation. As one participant put it “If something is not in the law, it does not exist. If it is in the law at least you can relate to it.” But even if health is mentioned in legislation, as now in the EIA and SEA Directives of the European Union, it still remains a vague concept and sector specific guidance on how and which health impacts to assess in the EIA/SEA is needed. These should also include guidance on how to assess the quality of HA or of the EA.

Further challenges are methodological concerns as there is no one standard approach that can be applied in all contexts. However, there is still a need to develop toolkits/checklists/criteria that can further facilitate the implementation. This could not only make the HIA and HA in the EA more attractive to the authority and avoid fatigue about further assessment, but also help to raise more national/global concerns for environment and health-related issues.

Clear guidance is needed, on who should conduct HIAs or HAs within EAs, defining required qualifications to conduct as well as to assess the quality of HIAs and HAs within EAs.

¹⁷ See e.g. Government of Wales (2009). Minerals Technical Advice Note 2:Coal (MATAN 2), , p. 94

6.2 Steps forward

The following areas of work and action should be considered to further enhance health in EAs and HIA implementation:

- Define good quality standards for health in EAs.
- Support Member States in developing legal regulations/frameworks for HIA with a systemic view.
- Break the language barriers: Translating key materials from IAIA, WHO, EIB and IFC in order to facilitate capacity building and other communication.
- Design and conduct joint intersectoral capacity building in Member States for health, environment and planning experts.
- Develop and offer intersectoral train-the-trainers workshops to further develop in-country capacity building on HIA and health in EA and set methodological standards.
- Create and provide resources for HIA and health in EA e.g. guidance in national languages, sector-specific guidance.
- Support further networking through informal networks, e.g. establish a self-help HIA group through European or national HIA and HA in EA networks and further promote already existing networks like the HIA e-mail list server run by the University of Liverpool.
- Promote HIA and HA within EA through already existing networks, e.g. Healthy Cities, Regions for Health.
- Develop good practice case studies in a public health or environmental health priority area to make the added value explicit.
- Provide evidence (good practices, case studies) of how EA and HIA together support good decision-making for improving the health of the population.
- Support HIA and health in EA as a possible theme to be discussed at the upcoming 6th European Ministerial Conference on Environment and Health, e.g. as a side event.

Appendix A: List of Participants

Temporary advisers

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Appendix B: Programme

Thursday, 24 September 2015

09.00 – 09.30	Registration
09.30 – 10.00	Welcome, introduction to the workshop and “tour de table” (E Paunovic & M Martuzzi, WHO; Chair for the meeting: R Fehr, University of Bielefeld)
10.00 – 10.30	Online survey and research on HIA implementation and health in EA across the Member States in the WHO European Region – First results and conclusions (P Martín- Olmedo, EUPHA; J Nowacki, WHO and I Kustov, Consultant)
10.30 – 11.00	The EIA and SEA Directives – consideration of health aspects in the assessment of plans, programmes and projects (S Dobрева De Schietere, DG Environment, EC)
11.00 – 11.30	Coffee break
11.30 – 12.00	Opportunities for health in Environmental Assessments through the Performance Standards of the European Investment Bank (A Relicovschi, EIB)
12.00 – 12.30	Opportunities for further health integration into SEA – examples from the UNECE projects (E Santer, UNECE)
12.30 – 13.00	Health in EIA in resource constrained settings (M Pfeiffer, WHO)
13.00 – 14.00	Lunch break
14.00 – 16.00	1. Session of the working groups: 1. What is needed for further HIA implementation and enhanced health integration into EAs? (Facilitator S Vohra, Public Health by Design) 2. How do we comply with formal requirements and should we go beyond? (Facilitator T Fischer, University of Liverpool) 3. How to assure good quality HIAs and health integrated EAs? (Facilitator B Cave, Ben Cave Associates Ltd.)
16.00 – 16.30	Coffee break
16.30 – 18.00	HIA implementation and health in EAs – Practical experiences, challenges and opportunities (I): <ul style="list-style-type: none"> ▪ The Welsh HIA Support Unit (L Green, WHIASU) ▪ HIA in the National Public Health Act of Slovakia (K Halzlova, NIPH) ▪ Public HIA (PHIA) in Lithuania (D Zukiene, Ministry of Health) ▪ HIA in Austria (G Gruber, HIA Support Unit)
18.30	Get together reception

Friday, 25 September 2015

08.45 – 09.00	Lessons learned from the first day – Representatives of the working groups
09.00 – 10.30	<p>HIA implementation and health in EAs – Practical experiences, challenges and opportunities (II):</p> <ul style="list-style-type: none"> ▪ The Netherlands Commission for Environmental Assessment (R Meeuwsen, NCEA) ▪ Health effects in EAs in Germany (J Hartlik, Office for Environmental Assessment and Quality Management) ▪ Opportunities for HIA and health in EA in the Russian Federation (M Khotuleva, Ecoline Environmental Assessment Centre) ▪ Opportunities for HIA and health in EA in Georgia (N Kiladze, Tbilisi University)
10.30 – 11.00	Coffee break
11.00 – 12.30	<p>Supporting HIA and health in EAs</p> <ul style="list-style-type: none"> ▪ Reuniting planning and health (T Fischer, University of Liverpool) ▪ HIA toolkit for healthy cities – practical experiences (N Cantoreggi, Healthy City Network/GRES) ▪ Quality assurance for HIA and health assessment in EAs (B Cave, Ben Cave Associates Ltd.)
12.30 – 13.30	Lunch break
13.30 – 15.00	<p>2. Session of the working groups</p> <ol style="list-style-type: none"> 1. What is needed for further HIA implementation and enhanced health integration into EAs? (Facilitator S Vohra, Public Health by Design) 2. How do we comply with formal requirements and should we go beyond? (Facilitator T Fischer, University of Liverpool) 3. How to assure good quality HIAs and health integrated EAs? (Facilitator B Cave, Ben Cave Associates Ltd.)
15.00 – 15.45	Results from the working groups – steps and practical arrangements for strengthening health inclusive EAs
15.45 – 16.00	Wrap-up and closure of the workshop (M Martuzzi, WHO)
16.00	Closing coffee

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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The importance of assessing the health implications of policies, plans, programmes and projects in different sectors has been acknowledged for more than two decades. Health Impact Assessment (HIA) supports Member States in significantly improving the health and well-being of populations and tackling health inequalities. The WHO Regional Office for Europe convened an expert meeting to discuss the status quo on HIA implementation and the integration of health aspects in environmental assessments in order to develop support for Member States in furthering HIA implementation and enhancing integration of health aspects in environmental assessments (EAs).

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